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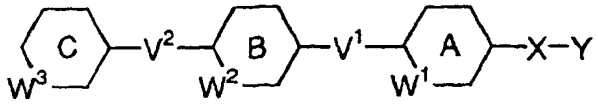
(54) NOVEL TRICYCLIC COMPOUND

(57) The present invention provides a compound of the formula (I):



I

wherein A ring, B ring and C ring are each independently optionally substituted aromatic carbocycle or optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring,
W^1, W^2 and/or W^3 represents a bond when A ring, B ring and/or C ring is optionally substituted 5-membered heterocycle,
X is -O-, -NR^1- wherein R^1 is hydrogen, lower alkyl etc. or the like,
Y is hydrogen, lower alkyl, lower alkenyl or the like,
one of V^1 and V^2 is a bond, and the other is a bond, -O- or the like,
and a pharmaceutical composition comprising the same.

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Description

Technical Field

[0001] The present invention relates to a novel tricyclic compound and a pharmaceutical composition for use as an immunosuppressant, an anti-allergic agent or a suppressant of the IgE production comprising the same.

Background Art

[0002] A serious problem of a transplantation of a tissue or an organ which is frequently performed in recent years is a rejection symptom for excluding a transplanted part after an operation. Prevention of the rejection symptom is very important for a success of the transplantation.

[0003] Various immunosuppressants such as azathioprine, corticoid, Cyclosporin A, Tacrolimus and the like are developed and come into practical use for prevention and a treatment of a rejection symptom against a transplantation of an organ or a tissue or a graft-versus-host reaction which is caused by a bone marrow transplantation. But they are not so satisfactory in view of their effects and side effects.

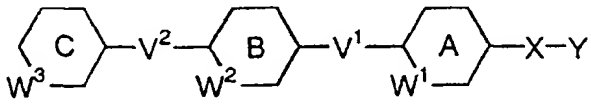
[0004] Allergic diseases such as atopic dermatitis, allergic rhinitis, bronchial asthma, allergic conjunctivitis and the like tend to globally increase in recent years and become serious problems. The conventional antiinflammatory agents are suppressants of releasing chemical mediators from mast cells, receptor inhibitors of the released chemical mediators, suppressants of allergic inflammation response or the like. All of these are agents for symptomatic therapy and are not fundamental therapeutic agents for allergic diseases.

[0005] Therefore, the development of a more effective and safer medicinal agent has been expected.

[0006] The compounds having a similar structure to a compound of the present invention and exhibiting an immunosuppressive or anti-allergic effect are described in WO94/27980, WO95/13067, WO96/40659, WO96/40143, WO96/38412, WO97/24356, WO97/24324, WO97/46524, JP-A 8-3163, JP-A 9-12457, JP-A 9-71564, JP-A 9-124571 and the like. The liquid crystal compounds are described in JP-A 9-87253, JP-A 63-253065, JP-A 1-106864, JP-A 1-106871, JP-A 2-83346, JP-A 9-48760, JP-A 9-31063 and the like, the compounds exhibiting an insecticide or acaricide activity are described in JP-A 8-193067 and the compounds having a therapeutic activity for circulatory system or psychopathy diseases are described in EP0600717 A1, all of which have a similar structure to a compound of the present invention.

Disclosure of Invention

[0007] The present invention provides a compound of the formula (I):



I

wherein A ring, B ring and C ring are each independently optionally substituted aromatic carbocycle or optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring,

W^1, W^2 and/or W^3 represents a bond when A ring, B ring and/or C ring is optionally substituted 5-membered heterocycle,

X is -O-, $-CH_2-$, $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl or -S(O)p- wherein p is an integer of 0 to 2,

Y is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted lower alkoxycarbonyl, optionally substituted sulfamoyl, optionally substituted amino, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle,

Y may be optionally substituted lower alkoxy when X is $-CH_2-$,

Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,

one of V^1 and V^2 is a bond and the other is a bond, -O-, -NH-, $-OCH_2-$, $-CH_2O-$, -CH=CH-, -C≡C-, $-CH(OR^2)-$ wherein R^2 is hydrogen or lower alkyl, -CO- or $-NHCHR^3-$ wherein R^3 is hydrogen or hydroxy, and

at least one of A ring, B ring and C ring is optionally substituted aromatic carbocycle and at least another one is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring when both of V^1 and V^2 are single bonds, pharmaceutically acceptable salt or hydrate thereof.

[0008] The present invention provides a pharmaceutical composition for use as an immunosuppressant, an antiallergic agent or a suppressant of the IgE production comprising the compound (I), pharmaceutically acceptable salt or hydrate thereof.

[0009] In one of the other embodiments, the present invention provides a method for suppressing an immune response or a method for treating and/or preventing allergic diseases comprising administering the compound (I). In another embodiment the present invention provides use of the compound (I) for manufacturing a medicament for suppressing an immune response or treating and/or preventing allergic diseases.

[0010] In the present specification, the term "halogen" includes fluorine, chlorine, bromine and iodine. Fluorine or chlorine is preferable.

[0011] The term "lower alkyl" includes straight or branched chain alkyl having 1 to 10 carbon atoms preferably 1 to 8 carbon atoms, more preferably 1 to 6 carbon atoms, and most preferably 1 to 3 carbon atoms. For example, included are methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, sec-butyl, tert-buryl, n-pentyl, isopentyl, neopentyl, hexyl, isohexyl, n-heptyl, isoheptyl, n-octyl, isooctyl, n-nonyl, n-decyl and the like.

[0012] As substituents of "optionally substituted lower alkyl", exemplified are halogen; hydroxy; lower alkoxy optionally substituted with lower alkoxy; acyl; acyloxy; carboxy; lower alkoxycarbonyl; mercapt; lower alkylthio; amino optionally substituted with hydroxy, lower alkyl or optionally substituted acyl; imino optionally substituted with hydroxy, lower alkoxy, carboxy(lower)alkoxy, aryl(lower)alkoxy or 5- or 6-membered heterocycle; hydrazono optionally substituted with carbamoyl or lower alkoxycarbonyl; carbamoyl optionally substituted with lower alkyl or amino; thiocarbamoyl optionally substituted with lower alkyl; cycloalkyl optionally substituted with lower alkyl or lower alkoxy; cycloalkenyl optionally substituted with lower alkyl; cyano; phenyl optionally substituted with at least one substituent selected from the group of hydroxy, lower alkyl, carboxy, lower alkoxycarbonyl and lower alkoxy; 5- or 6-membered heterocycle which may be substituted with lower alkyl and may fuse with benzene ring; and the like. The lower alkyl may be substituted with one or more of these substituents at any possible positions. Halogen; hydroxy; acyloxy; phenyl optionally substituted with lower alkyl or lower alkoxy; pyridyl or the like is preferable.

[0013] The part of lower alkyl in "lower alkoxy" is the same as the above "lower alkyl".

[0014] As substituents for "optionally substituted lower alkoxy", exemplified are halogen; hydroxy; lower alkoxy optionally substituted with acyloxy; acyl; acyloxy optionally substituted with hydroxy or carboxy; carboxy; lower alkoxycarbonyl; lower alkylthio; amino optionally substituted with lower alkyl; phenyl optionally substituted with lower alkyl or lower alkoxy; heterocycle; heterocyclylcarbonyloxy and the like.

[0015] The parts of lower alkyl in "lower alkoxycarbonyl", "lower alkylsulfonyl", "lower alkylsulfonyloxy", "lower alkylthio", "lower alkylamino" and "lower alkylenedioxy" are the same as the above "lower alkyl". Substituents for "optionally substituted lower alkoxycarbonyl", "optionally substituted lower alkylsulfonyl" and "optionally substituted lower alkylthio" are the same as those for the above "optionally substituted lower alkoxy".

[0016] The term "lower alkenyl" includes straight or branched chain alkenyl of 2 to 10 carbon atoms, preferably 2 to 8 carbon atoms, more preferably 3 to 6 carbon atoms having at least one double bond at any possible positions. For example, included are vinyl, propenyl such as 2-propenyl and the like, isopropenyl, butenyl, isobutenyl, prenyl, butadienyl, pentenyl, isopentenyl, pentadienyl, hexenyl, isohexenyl, hexadienyl, heptenyl, octenyl, nonenyl, decenyl and the like. Substituents for "optionally substituted lower alkenyl" are the same as those for the above "optionally substituted lower alkoxy" and alkenyl substituted with halogen or unsubstituted alkenyl is preferable.

[0017] The parts of lower alkenyl in "lower alkenyloxy", "lower alkenyloxycarbonyl" and "lower alkenylamino" are the same as the above "lower alkenyl". Substituents for "optionally substituted lower alkenyloxy", "optionally substituted lower alkenyloxycarbonyl" and "optionally substituted lower alkenylthio" are the same as those for the above "optionally substituted lower alkoxy".

[0018] The term "lower alkynyl" includes straight or branched chain alkynyl having 2 to 10 carbon atoms, preferably 2 to 8 carbon atoms, and more preferably 3 to 6 carbon atoms and is exemplified by ethynyl, propynyl such as 2-propynyl, butynyl such as 2-butynyl, pentynyl, hexynyl, heptynyl, octynyl, nonynyl, decynyl and the like. These have at least one triple bond and may have some double bonds at any possible positions. Substituents for "optionally substituted lower alkynyl" are the same as those for the above "optionally substituted lower alkoxy".

[0019] The term "acyl" includes straight or branched chain aliphatic acyl having 1 to 20 carbon atoms, preferably 1 to 15 carbon atoms, more preferably 1 to 8 carbon atoms, more preferably 1 to 6 carbon atoms, most preferably 1 to 4 carbon atoms, cyclic aliphatic acyl having 4 to 9 carbon atoms, preferably 4 to 7 carbon atoms and aroyl. For example, formyl, acetyl, propionyl, butyryl, isobutyryl, valeryl, pivaloyl, hexanoyl, acryloyl, propioloyl, methacryloyl, crotonoyl, cyclopropylcarbonyl, cyclohexylcarbonyl, cyclooctylcarbonyl, benzoyl and the like are included. Substituents for "optionally substituted acyl" are the same as those for the above "optionally substituted lower alkoxy" and aroyl may further be substituted with lower alkyl. Among the substituents, halogen is preferable.

[0020] The part of acyl in "acyloxy" is the same as the above "acyl" and substituents for "optionally substituted acyloxy" are the same as those for the above "optionally substituted acyl".

[0021] The term "lower alkylcarbonyl" includes aliphatic acyl having 2 to 4 carbon atoms and included are acetyl, propyl, buryryl, isobutyryl and the like. Acetyl is preferable.

[0022] The term "cycloalkyl" includes carbocycle having 3 to 6 carbon atoms and cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl and the like. As substituents for "optionally substituted cycloalkyl" exemplified are lower alkyl, halogen, hydroxy, carboxy, lower alkoxycarbonyl, lower alkoxy, lower alkylenedioxy, imino optionally substituted with lower alkoxy, aryl, 5- or 6-membered heterocycle and the like and the cycloalkyl may be substituted at any possible positions.

[0023] The term "cycloalkenyl" includes the group having at least one double bond at any possible positions in the above cycloalkyl and is exemplified by cyclopropenyl, cyclobutenyl, cyclopentenyl, cyclohexenyl, cyclohexadienyl and the like. Substituents for "optionally substituted cycloalkenyl" are the same as those for the above "cycloalkyl".

[0024] As substituents for "optionally substituted amino", exemplified are optionally substituted lower alkyl (wherein the substituents are lower alkoxy, cycloalkyl, optionally substituted amino (wherein the substituents are aroyl optionally substituted with acyloxy(lower)alkoxy), optionally substituted aryl (wherein the substituents are lower alkyl, lower alkoxy, carboxy or lower alkoxycarbonyl) or heterocycle}; lower alkenyl; lower alkynyl; cycloalkyl; aryl optionally substituted with lower alkyl, carboxy, acyl, lower alkoxycarbonyl; sulfamoyl optionally substituted with lower alkyl; optionally substituted lower alkoxycarbonyl (the substituents are halogen, acyloxy, acyloxy substituted with hydroxy, acyloxy substituted with carboxy or heterocyclylcarbonyloxy or the like): lower alkylsulfonyl and the like.

[0025] The term "optionally substituted carbamoyl" includes carbamoyl optionally substituted with lower alkyl, lower alkenyl, lower alkynyl or the like.

[0026] The term "optionally substituted sulfamoyl" includes sulfamoyl optionally substituted with lower alkyl, lower alkenyl, lower alkynyl or the like.

[0027] The term "aromatic carbocycle" includes benzene ring, naphthalene ring, anthracene ring, phenanthrene ring, indene ring and the like and benzene ring is preferable.

[0028] The term "aryl" includes phenyl, naphthyl, anthryl, phenanthryl, indenyl and the like and phenyl is preferable.

[0029] As substituents for "optionally substituted aromatic carbocycle" and "optionally substituted aryl", exemplified are halogen: hydroxy; lower alkyl optionally substituted with halogen or carboxy; lower alkoxy optionally substituted with halogen, aryl, heteroaryl or lower alkoxy; lower alkenyl; lower alkynyl; cycloalkyl; lower alkenyloxy; lower alkynyloxy; cycloalkoxy; acyl; acyloxy; carboxy; lower alkoxycarbonyl: lower alkenyloxycarbonyl; lower alkylthio; lower alkynylthio; amino optionally substituted with lower alkyl, cycloalkyl(lower)alkyl, heteroaryl(lower)alkyl, lower alkenyl, cycloalkyl, acyl optionally substituted with halogen, lower alkoxycarbonyl, or lower alkylsulfonyl; guanidino; nitro; lower alkylsulfonyl; dihydroxyborane; lower alkylsulfonyloxy optionally substituted with halogen; arylsulfonyl; arylsulfonyloxy; aryl; 5- or 6-membered heterocycle and the like. The aromatic carbocycle and aryl may be substituted with these substituents at one or more of any possible positions. Preferable examples are halogen; hydroxy; lower alkyl optionally substituted with halogen; lower alkoxy optionally substituted with aryl or lower alkoxy; lower alkenyloxy; acyloxy; lower alkylthio; amino optionally substituted with lower alkyl, lower alkenyl, acyl optionally substituted with halogen, or lower alkylsulfonyl; nitro; lower alkylsulfonyl; lower alkylsulfonyloxy optionally substituted with halogen: or arylsulfonyloxy.

[0030] The parts of aryl in "arylsulfonyl" and "arylsulfonyloxy" are the same as the above "aryl" and phenyl is preferable. Substituents for "optionally substituted arylsulfonyl" are the same as those for the above "optionally substituted aryl" and unsubstituted arylsulfonyl is preferable.

[0031] The term "5- or 6-membered heterocycle" includes 5- or 6-membered heterocycle which contains at least one of hetero atoms arbitrarily selected from a group of O, S and N. Examples of heterocycle include aromatic heterocycle such as pyrrole ring, imidazole ring, pyrazole ring, pyridine ring such as 4-pyridyl, pyridazine ring, pyrimidine ring, pyrazine ring, triazole ring, triazine ring, isoxazole ring, oxazole ring, oxadiazole ring, isothiazole ring, thiazole ring, thiadiazole ring, furan ring such as 2-furyl or 3-furyl, thiophene ring such as 3-thienyl and the like, aliphatic heterocycle such as tetrahydropyrane ring, dihydropyridine ring such as 1,2-dihydropyridyl, dihydropyridazine such as 2,3-dihydropyridazinyl, dihydropyrazine ring such as 1,2-dihydropyrazinyl, dioxane ring, oxathiorane ring, thiane ring, pyrrolidine ring, pyrroline ring, imidazolidine ring, imidazoline ring, pyrazolidine ring, pyrazoline ring, piperidine ring, piperazine ring, morpholine ring and the like.

[0032] The term "5- or 6-membered heterocycle which contains one or two hetero atoms" includes aromatic heterocycle such as pyrrole ring, imidazole ring, pyrazole ring, pyridine ring, pyridazine ring, pyrimidine ring, pyrazine ring, isoxazole ring, oxazole ring, isothiazole ring, thiazole ring, furan ring, thiophene ring or the like and aliphatic heterocycle such as dioxane ring, oxathiorane ring, thiane ring, dihydropyridine ring, pyrrolidine ring, pyrroline ring, imidazolidine ring, imidazoline ring, pyrazolidine ring, pyrazoline ring, piperidine ring, piperazine ring, morpholine ring or the like among the above "5- or 6-membered heterocycle". Aromatic heterocycle is preferable.

[0033] As "5- or 6-membered ring which may fuse with benzene ring", exemplified are indole ring, isoindole ring, benzimidazole ring, indazole ring, cinnoline ring, phthalazine ring, quinazoline ring, benzisoxazole ring, benzoxazole

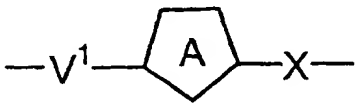
ring, benzoxadiazole ring, benzothiazole ring, benzisothiazole ring, benzofuran ring, benzothiophen ring, benzotriazole ring, isobenzofuran ring, chromen ring, indoline ring, isoindoline ring and the like.

[0034] As substituents for "optionally substituted 5- or 6-membered heterocycle" and "optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring" exemplified are halogen; hydroxy; lower alkyl optionally substituted with hydroxy or acyloxy; lower alkoxy optionally substituted with halogen, aryl or 5- or 6-membered heterocycle; lower alkenyl; lower alkenyloxy; lower alkynyl; lower alkynyloxy; acyloxy: carboxy; lower alkoxycarbonyl; mercapt; lower alkylthio; lower alkenylthio: amino which may be mono- or di-substituted with halogen, optionally substituted lower alkyl wherein the substituents are cycloalkyl or 5- or 6-membered heterocycle, acyl optionally substituted with halogen, lower alkenyl, cycloalkyl, or lower alkylsulfonyl; imino optionally substituted with lower alkylsulfonyl; nitro; lower alkylsulfonyl; aryl; 5- or 6-membered heterocycle; oxo; oxide and the like. These substituents may substitute at one or more of any possible positions.

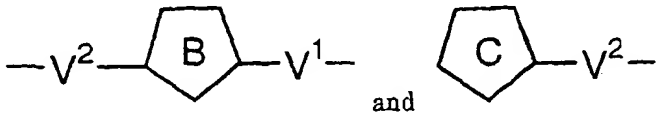
[0035] The substituents for "optionally substituted 5- or 6-membered heterocycle which contains one or two of hetero atoms" are the same as the above. 5- or 6-membered heterocycle substituted with lower alkyl or unsubstituted one is preferable.

[0036] The term "W^1, W^2 and/or W^3 represents a bond when A ring, B ring and/or C ring is optionally substituted 5-membered hererocycle" means as follows:

W^1 represents a bond when A ring is optionally substituted 5-membered heterocycle, resulting in the binding positions of V^1 and X to A ring as shown below.



Each of W^2 and W^3 represents a bond when B ring or C ring is 5-membered heterocycle, resulting in the binding positions of V^1 and V^2 shown below.



and

Each of X, V^1 and V^2 may directly bind to a hetero atom constituting A ring, B ring or C ring.

[0037] The term "compound (I)" includes formable and pharmaceutically acceptable salts of each compound. As "the pharmaceutically acceptable salt", exemplified are salts with mineral acids such as hydrochloric acid, sulfuric acid, nitric acid, phosphoric acid, hydrofluoric acid, hydrobromic acid and the like; salts with organic acids such as formic acid, acetic acid, tartaric acid, lactic acid, citric acid, fumaric acid, maleic acid, succinic acid and the like; salts with organic base such as ammonium, trimethylammonium, triethylammonium and the like; salts with alkaline metals such as sodium, potassium and the like and salts with alkaline earth metals such as calcium, magnesium and the like.

[0038] The compound of the present invention includes hydrates and all of stereoisomers, for example, atropisomers etc. thereof.

Best Mode for Carrying Out the Invention

[0039] All of the compounds (I) have an immunosuppressive effect, an anti-allergic effect and/or a suppressive effect on the IgE production and the following compounds are specifically preferable.

[0040] In the formula (I),

1) a compound wherein A ring is optionally substituted benzene ring,
preferably A ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy, acyloxy, lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy (wherein the substituents are halogen) or arylsulfonyloxy},
more preferably A ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy or lower alkylsulfonyloxy),
2) a compound wherein B ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally

substituted thiophene ring, optionally substituted furan ring, optionally substituted pyrazole ring or optionally substituted oxazole ring,
preferably B ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy, lower alkenyloxy, lower alkylthio, cycloalkoxy, lower alkoxycarbonyl or lower alkylsulfonyloxy),
optionally substituted pyridine ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy, lower alkylthio, lower alkenyl, amino, carboxy or lower alkoxycarbonyl),
optionally substituted pyrimidine ring {wherein the substituents are halogen, optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), lower alkoxy, lower alkylthio, optionally substituted amino (wherein the substituents are lower alkyl), carboxy or lower alkoxycarbonyl},
optionally substituted pyridazine ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy, lower alkylthio, lower alkenyl, amino, carboxy, lower alkoxycarbonyl or oxide),
optionally substituted thiophene ring (wherein the substituents are lower alkyl), optionally substituted pyrazole ring (wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy), lower alkoxy, carboxy or lower alkoxycarbonyl},
or optionally substituted oxazole ring (wherein the substituents are lower alkyl), more preferably B ring is optionally substituted benzene ring (wherein the substituents are hydroxy, lower alkyl, lower alkoxy or lower alkylsulfonyloxy), optionally substituted pyridine ring (wherein the substituents are halogen or lower alkyl),
optionally substituted pyrimidine ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), lower alkoxy, lower alkylthio, optionally substituted amino (wherein the substituents are lower alkyl), carboxy or lower alkoxycarbonyl},
optionally substituted pyrazole ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy), lower alkoxy, carboxy or lower alkoxycarbonyl},

3) a compound wherein C ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted isoxazole ring, optionally substituted pyrazole ring, optionally substituted benzothiazole ring, optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring, optionally substituted triazole ring, optionally substituted dihydropyridine ring, optionally substituted dihydropyridazine ring or optionally substituted dihydropyrazine ring, preferably C ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkyl (wherein the substituents are halogen), optionally substituted lower alkoxy (wherein the substituents are aryl or lower alkoxy), lower alkenyloxy, lower alkylthio, optionally substituted amino {wherein the substituents are lower alkyl, lower alkenyl, optionally substituted acyl (wherein the substituents are halogen) or lower alkylsulfonyl], nitro, lower alkylsulfonyl or lower alkylsulfonyloxy},
optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted isoxazole ring, optionally substituted pyrazole ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), optionally substituted lower alkoxy (wherein the substituents are halogen, aryl or 5- or 6-membered heterocycle), lower alkenyl, lower alkenyloxy, lower alkynyl, lower alkynyloxy, acyloxy, carboxy, lower alkoxycarbonyl, mercapt, lower alkylthio, lower alkenylthio, optionally mono- or di-substituted amino {wherein the substituents are halogen, optionally substituted lower alkyl (wherein the substituents are cycloalkyl or 5- or 6-membered heterocycle), optionally substituted acyl (wherein the substituents are halogen), lower alkenyl, cycloalkyl or lower alkylsulfonyl}, optionally substituted imino (wherein the substituents are lower alkylsulfonyl), nitro, lower alkylsulfonyl, aryl, 5- or 6-membered heterocycle, oxo or oxide},
benzothiazole ring,
optionally substituted dihydropyridine (wherein the substituents are oxo), optionally substituted dihydropyridazine ring (wherein the substituents are oxo), optionally substituted dihydropyrazine ring (wherein the substituents are oxo), more preferably C ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, optionally substituted lower alkyl (wherein the substituents are halogen), optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, lower alkylthio, optionally mono- or di-substituted amino {wherein the substituents are lower alkyl, lower alkenyl, optionally substituted acyl (wherein the substituents are halogen) or lower alkylsulfonyl], intro. lower alkylsulfonyl or lower alkylsulfonyloxy},
optionally substituted pyridine ring {wherein the substituents are halogen, hydroxy, lower alkyl, lower alkenyl, lower alkynyl, optionally substituted lower alkoxy (wherein the substituents are halogen, aryl or 5- or 6-membered heterocycle), lower alkenyloxy, lower alkynyloxy, lower alkylthio, lower alkenylthio, optionally substituted amino (wherein the substituents are lower alkyl, heterocyclyl(lower)alkyl, cycloalkylalkyl, lower alkenyl or cycloalkyl), lower alkylsulfonyl, 5- or 6-membered heterocycle, nitro or oxo},
optionally substituted pyrimidine ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, or optionally substituted amino (wherein the substituents are lower alkyl or lower alkenyl)},

optionally substituted pyridazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, or optionally substituted amino (wherein the substituents are lower alkyl, lower alkoxy or lower alkenyl)},
optionally substituted pyrazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkenyl)},

4) a compound wherein X is -O- or -NR^1- (wherein R^1 is hydrogen, methyl or prenyl), preferably X is -O-, -NH- or -NMe-,
more preferably X is -O- or -NH-,

5) a compound wherein Y is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, lower alkylsulfonyl or optionally substituted acyl, preferably Y is optionally substituted lower alkyl, optionally substituted lower alkenyl, lower alkylsulfonyl or optionally substituted acyl,
more preferably Y is optionally substituted lower alkyl {wherein the substituents are 5- or 6-membered heterocycle, or optionally substituted phenyl (wherein the substituents are lower alkyl or lower alkoxy)} or optionally substituted lower alkenyl (wherein the substituents are halogen),
most preferably Y is methyl, optionally substituted prenyl (wherein the substituents are halogen) or optionally substituted benzyl (wherein the substituents are lower alkyl or lower alkoxy).

6) a compound wherein X is -O- or -NH- and Y is optionally substituted prenyl (wherein the substituents are halogen), or optionally substituted benzyl(wherein the substituents are lower alkyl or lower alkoxy), or X is -NR^1- and Y is methyl, preferably -X-Y is -$OCH_2CH{=}CMe_2$, -OBn, -$OCH_2C_6H_4$-2-Me, -$OCH_2C_6H_4$-3-Me, -$OCH_2C_6H_4$-4-Me, -$OCH_2C_6H_4$-4-OMe, -NMe_2 or -$NHCH_2CH{=}CMe_2$,
more preferably -X-Y is -$OCH_9CH{=}CMe_2$, -OBn or -NMe_2,

7) a compound wherein one of V^1 and V^2 is a single bond and the other is a single bond, -O- or -NH-,
preferably V^1 is a single bond and V^2 is a single bond, -O- or -NH-,
more preferably both of V^1 and V^2 are single bonds,

8) a compound wherein A ring is optionally substituted benzene ring,
B ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted thiophene ring, optionally substituted furan ring, optionally substituted pyrazole ring or optionally substituted oxazole ring,
C ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted isoxazole ring, optionally substituted pyrazole ring, optionally substituted benzothiazole ring, optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring or optionally substituted triazole ring,
X is -O- or -NR^1- wherein R^1 is hydrogen, methyl or prenyl,
Y is optionally substituted lower alkyl or optionally substituted lower alkenyl, and one of V^1 and V^2 is a single bond and the other is a single bond, -O- or -NH-, preferably A ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, lower alkoxy, acyloxy, lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy (wherein the substituents are halogen) or arylsulfonyloxy},
B ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy, lower alkoxycarbonyl, lower alkenyloxy or lower alkylsulfonyloxy),
optionally substituted pyridine ring (wherein the substituents are halogen or lower alkyl),
optionally substituted pyrimidine ring (wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), lower alkoxy, lower alkylthio, optionally substituted amino (wherein the substituents are lower alkyl), carboxy or lower alkoxycarbonyl)},
optionally substituted pyridazine ring (wherein the substituents are lower alkyl or oxide),
optionally substituted thiophene ring (wherein the substituents are lower alkyl), optionally substituted pyrazole ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy), lower alkoxy, carboxy, or lower alkoxycarbonyl},
or optionally substituted oxazole ring (wherein the substituents are lower alkyl), C ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkyl (wherein the substituents are halogen), optionally substituted lower alkoxy (wherein the substituents are aryl or lower alkoxy), lower alkenyloxy, lower alkylthio, optionally substituted amino {wherein the substituents are lower alkyl, lower alkenyl, optionally substituted acyl (wherein the substituents are halogen) or lower alkylsulfonyl}, nitro, lower alkylsulfonyl or lower alkylsulfonyloxy},
optionally substituted pyridine ring {wherein the substituents are halogen, hydroxy, lower alkyl, lower alkenyl, lower alkynyl, optionally substituted lower alkoxy (wherein the substituents are halogen, aryl or 5- or 6-membered heterocycle), lower alkenyloxy, lower alkynyloxy, lower alkylthio, lower alkenylthio, optionally substituted amino (wherein

the substituents are lower alkyl, heterocyclyl(lower)alkyl, cycloalkylalkyl, lower alkenyl or cycloalkyl), lower alkylsulfonyl, 5- or 6-membered heterocycle, nitro or oxo},
optionally substituted pyrimidine ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl or lower alkenyl)},
optionally substituted pyridazine ring (wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl, lower alkoxy or lower alkeny)},
optionally substituted pyrazine ring {the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, optionally substituted amino (wherein the substituents are lower alkenyl)},
optionally substituted isoxazole ring (wherein the substituents are optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, or optionally substituted amino (wherein the substituents are lower alkenyl or lower alkylsulfonyl)},
optionally substituted pyrazole ring {wherein the substituents are lower alkyl, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, or optionally substituted amino (wherein the substituents are lower alkenyl or lower alkylsulfonyl)},
or benzothiazole ring,
X is -O-, -NH- or -NMe-,
Y is optionally substituted lower alkyl {wherein the substituents are 5- or 6-membered heterocycle or optionally substituted phenyl (wherein the substituents are lower alkyl or lower alkoxy)} or lower alkenyl (wherein the substituents are halogen), and one of V^1 and V^2 is a single bond and the other is a single bond, -O- or -NH-, more preferably A ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkoxy or lower alkylsulfonyloxy),
B ring is benzene ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy or lower alkoxycarbonyl),
optionally substituted pyridine ring (wherein the substituents are halogen or lower alkyl),
optionally substituted pyrimidine ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), lower alkoxy, lower alkylthio, optionally substituted amino (wherein the substituents are lower alkyl), carboxy or lower alkoxycarbonyl},
optionally substituted pyrazole ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy), lower alkoxy, carboxy, or lower alkoxycarbonyl},
C ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkyl (wherein the substituents are halogen), optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, lower alkylthio, optionally substituted amino {wherein the substituents are lower alkyl, lower alkenyl, optionally substituted acyl (wherein the substituents are halogen), or lower alkylsulfonyl}, nitro, lower alkylsulfonyl or lower alkylsulfonyloxy},
optionally substituted pyridine ring {wherein the substituents are halogen, hydroxy, lower alkyl, lower alkenyl, lower alkynyl, optionally substituted lower alkoxy (wherein the substituents are halogen, aryl or 5- or 6-membered heterocycle), lower alkenyloxy, lower alkynyloxy, lower alkylthio, lower alkenylthio, optionally substituted amino (wherein the substituents are lower alkyl, heterocyclyl(lower)alkyl, cycloalkylalkyl, lower alkenyl or cycloalkyl), lower alkylsulfonyl, 5- or 6-membered heterocycle, nitro or oxo},
optionally substituted pyrimidine ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl or lower alkenyl)},
optionally substituted pyridazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl, lower alkoxy or lower alkenyl)},
or optionally substituted pyrazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkenyl)},
X is -O- and Y is prenyl or optionally substituted benzyl (wherein the substituents are lower alkyl or lower alkoxy) or X is $-NR^1-$ and Y is methyl,
V^1 is a single bond and V^2 is a single bond, -O- or -NH-,
more preferably A ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkoxy or lower alkylsulfonyloxy), B ring is optionally substituted benzene ring (wherein the substituents are halogen, hydroxy, lower alkyl, lower alkoxy or lower alkoxycarbonyl),
optionally substituted pyridine ring (wherein the substituents are lower alkyl), optionally substituted pyrimidine ring (wherein the substituents are lower alkyl, lower alkoxy, carboxy or lower alkoxycarbonyl),

optionally substituted pyrazole ring (wherein the substituents are lower alkyl, lower alkoxy, carboxy or lower alkoxycarbonyl),

C ring is optionally substituted benzene ring {wherein the substituents are halogen, hydroxy, lower alkoxy, lower alkenyloxy, optionally substituted amino (wherein the substituents are lower alkyl) or lower alkylsulfonyloxy},

optionally substituted pyridine ring {wherein the substituents are optionally substituted amino {wherein the substituents are halogen, lower alkyl, optionally substituted lower alkoxy (wherein the substituents are aryl or 5- or 6-membered heterocycle), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl, heterocyclyl(lower)alkyl or lower alkenyl)}, optionally substituted pyrimidine ring (wherein the substituents are halogen, hydroxy, lower alkoxy, lower alkenyloxy, amino or lower alkenylamino), optionally substituted pyridazine ring (wherein the substituents are halogen, lower alkoxy, lower alkenyloxy, amino, lower alkylamino or lower alkenylamino), or optionally substituted pyrazine ring (wherein the substituents are lower alkenyloxy, amino or lower alkenylamino),

X is -O- and Y is prenyl or optionally substituted benzyl (wherein the substituents are lower alkyl or lower alkoxy) or X is NR^1 and Y is methyl or prenyl,

V^1 is a single bond and V^2 is a single bond, -O- or -NH,

9) a compound wherein two of A ring, B ring and C ring are optionally substituted benzene ring and the other one is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring,

preferably A ring is optionally substituted benzene ring, one of B ring and C ring is optionally substituted benzene ring and the other is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring,

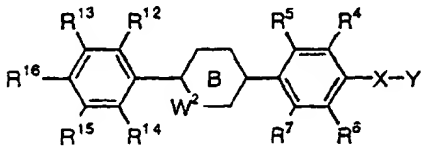
more preferably A ring is optionally substituted benzene ring, one of B ring and C ring is optionally substituted benzene ring and the other is optionally substituted 5-or 6-membered heterocycle which may fuse with benzene ring and both of V^1 and V^2 are single bonds,

10) a compound wherein all of A ring, B ring and C ring are optionally substituted benzene ring, V^1 is a single bond and V^2 is -O- or -NH-,

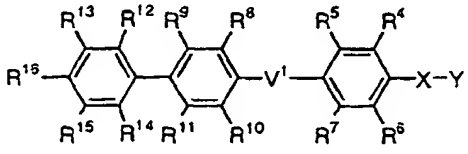
11) a compound wherein both of A ring and B ring are optionally substituted benzene ring and -X-Y is $-NMe_2$, prenyloxy or prenylamino,

preferably both of A ring and B ring are optionally substituted benzene ring and C ring is optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted isoxazole ring or optionally substituted pyrazole ring, -X-Y is $-NMe_2$, prenyloxy or prenylamino and both of V^1 and V^2 are single bonds,

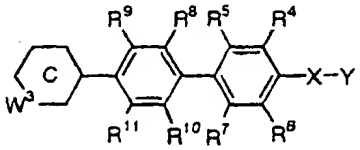
12) a compound of any of following formulas



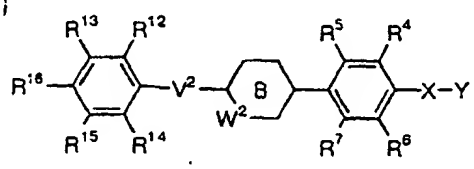
Ia



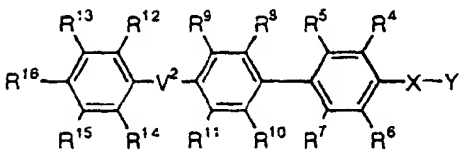
Id



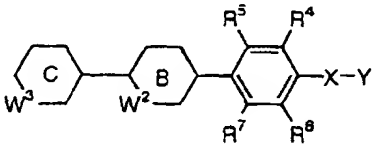
Ib



Ie



Ic

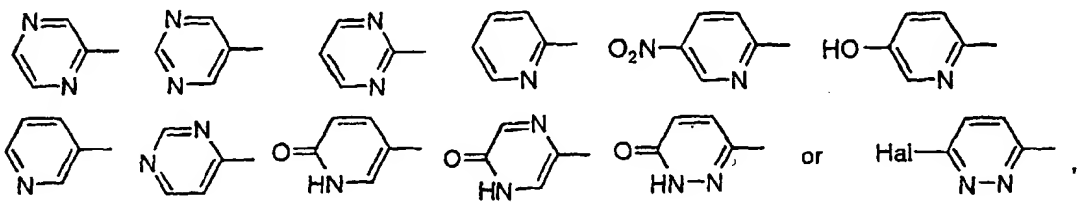


If

wherein R^4, R^5, R^6 and R^7 are each independently hydrogen, halogen, hydroxy, lower alkoxy, acyloxy, optionally substituted lower alkylsulfonyloxy (wherein the substituents are halogen) or arylsulfonyloxy,

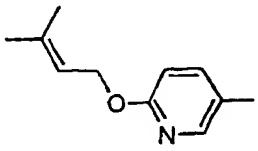
R^8, R^9, R^{10} and R^{11} are each independently hydrogen, hydroxy, lower alkyl, lower alkoxy or lower alkylsulfonyloxy,
R^{12}, R^{13}, R^{14}, R^{15} and R^{16} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl(wherein the substituents are halogen), optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, lower alkylthio, lower alkylsulfonyl, lower alkylsulfonyloxy, nitro or optionally substituted amino {wherein the substituents are lower alkyl, lower alkenyl, optionally substituted acyl (wherein the substituents are halogen) or lower alkylsulfonyl},
B ring is optionally substituted pyridine ring (wherein the substituents are halogen or lower alkyl),
optionally substituted pyrimidine ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy or acyloxy), lower alkoxy, lower alkylthio, optionally substituted amino (wherein the substituents are lower alkyl), carboxy or lower alkoxycarbonyl},
optionally substituted pyridazine (wherein the substituents are lower alkyl or oxide), optionally substituted thiophene ring (wherein the substituents are lower alkyl), optionally substituted pyrazole ring {wherein the substituents are optionally substituted lower alkyl (wherein the substituents are hydroxy), lower alkoxy, carboxy or lower alkoxycarbonyl},
or optionally substituted oxazole ring (wherein the substituents are lower alkyl),
C ring is optionally substituted pyridine ring {wherein the substituents are hydroxy, halogen, lower alkyl, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy, optionally substituted amino {wherein the substituents are lower alkyl, optionally substituted acyl (wherein the substituents are halogen), lower alkenyl, or lower alkylsulfonyl}, nitro, lower alkylthio, lower alkylsulfonyl or optionally substituted imino (wherein the substituents are lower alkylsulfonyl)}, optionally substituted pyrimidine ring {wherein the substituents are halogen, hydroxy, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl or lower alkenyl)},
optionally substituted pyridazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl, lower alkoxy, lower alkenyl or lower alkenyloxy)},
optionally substituted pyrazine ring {wherein the substituents are halogen, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkyl or lower alkenyl)},
optionally substituted isoxazole ring {wherein the substituents are optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkenyl or lower alkylsulfonyl)},
optionally substituted pyrazole ring {wherein the substituents are lower alkyl, optionally substituted lower alkoxy (wherein the substituents are aryl), lower alkenyloxy or optionally substituted amino (wherein the substituents are lower alkenyl or lower alkylsulfonyl)},
benzothiazole ring,
morpholine ring,
piperazine ring (wherein the substituents are lower alkyl or phenyl),
imidazole ring
or triazole ring,
V^1 is a single bond or -O-,
V^2 is a single bond, -O-, -NH-, $-OCH_2-$, $-CH_2O-$, -CH=CH-, -C≡C-, -CH(OEt)-, -CH(OH)-, -CO-, $-NHCH_2-$ or -NHCH(OH)-,
X is -O- or $-NR^1-$ (wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl),
and Y is methyl, optionally substituted prenyl (wherein the substituents are halogen) or optionally substituted benzyl (wherein the substituents are lower alkyl or lower alkoxy)

13) a compound wherein both of A ring and B ring are optionally substituted benzene ring and C ring is



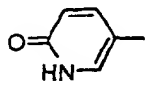
Y is $CH_2CH=CMe_2$ and both of V^1 and V^2 are single bonds,

14) a compound wherein both of A ring and B ring are benzene ring, C ring is



X is -O-, Y is hydrogen, and both of V^1 and V^2 are single bonds,

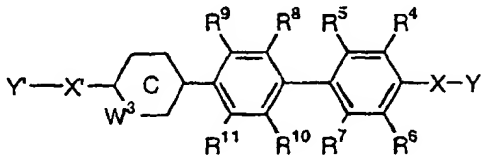
15) a compound wherein both of A ring and B ring is optionally substituted benzene ring, C ring is



X is -NH- and both of V^1 and V^2 are single bonds.

[0041] Another preferable embodiment is,

[1] a compound of the following formula (Ib'):



Ib'

wherein C ring is optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms and W^3 represents a bond when C ring is 5-membered heterocycle,

X and X' are each independently -O-, $-CH_2-$, $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl, or -S(O)p- wherein p is an integer of 0 - 2,

Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted lower alkoxycarbonyl, optionally substituted amino, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle,

R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ wherein Q is CH_2, O, S or NR', -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,

Y may be optionally substituted lower alkoxy when X is $-CH_2-$, Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,

Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,

Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,

Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,

Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$.

R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted cycloalkyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally

substituted lower alkenylthio, optionally substituted amino, optionally substituted carbamoyl, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy,
excluding compounds wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen.

In the following compound of the formula (Ib'), preferable is:

a compound wherein R^4 and R^5 are each independently hydrogen, hydroxy, halogen, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted acyloxy, optionally substituted lower alkylsulfonyloxy or optionally substituted arylsulfonyloxy (hereinafter referred to as "R^4 and R^5 are R45-1"),

a compound wherein R^4 and R^5 are each independently hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy, acyloxy, optionally substituted lower alkylsulfonyloxy or arylsulfonyloxy (hereinafter referred to as "R^4 and R^5 are R45-2"),

a compound wherein R^4 and R^5 are each independently hydrogen, halogen or lower alkoxy (hereinafter referred to as "R^4 and R^5 are R45-3"),

a compound wherein one of R^4 and R^5 is hydrogen and the other is halogen (hereinafter referred to as "R^4 and R^5 are R45-4"),

a compound wherein one of R^4 and R^5 is hydrogen and the other is chloro or fluoro (hereinafter referred to as "R^4 and R^5 are R45-5"),

a compound wherein R^4 is hydrogen and R^5 is halogen (hereinafter referred to as "R^4 and R^5 are R45-6"),

a compound wherein R^4 is hydrogen and R^5 is chloro or fluoro (hereinafter referred to as "R^4 and R^5 are R45-7"),

a compound wherein R^6 and R^7 are each independently hydrogen, halogen or lower alkyl (hereinafter referred to as "R^6 and R^7 are R67-1"),

a compound wherein both of R^6 and R^7 are hydrogen (hereinafter referred to as "R^6 and R^7 are R67-2"),

a compound wherein R^8 and R^{11} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted cycloalkoxy, optionally substituted lower alkylthio, optionally substituted lower alkoxycarbonyl or optionally substituted lower alkylsulfonyloxy (hereinafter referred to as "R^8 and R^{11} are R811-1"),

a compound wherein R^8 and R^{11} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted cycloalkoxy, optionally substituted lower alkylthio, optionally substituted lower alkoxycarbonyl or optionally substituted lower alkylsulfonyloxy (hereinafter referred to as "R^8 and R^{11} are R811-2"),

a compound wherein R^8 and R^{11} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy or optionally substituted lower alkoxycarbonyl (hereinafter referred to as "R^8 and R^{11} are R811-3"),

a compound wherein R^8 and R^{11} are each independently hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkoxy or lower alkoxycarbonyl (hereinafter referred to as "R^8 and R^{11} are R811-4"),

a compound wherein R^8 and R^{11} are each independently hydrogen, optionally substituted lower alkyl, optionally substituted lower alkoxy or lower alkoxycarbonyl (hereinafter referred to as "R^8 and R^{11} are R811-5"),

a compound wherein R^8 and R^{11} are each independently hydrogen, optionally substituted lower alkyl or optionally substituted lower alkoxy (hereinafter referred to as "R^8 and R^{11} are R811-6"),

a compound wherein R^8 and R^{11} are each independently optionally substituted lower alkyl or optionally substituted lower alkoxy (hereinafter referred to as "R^8 and R^{11} are R811-7"),

a compound wherein R^8 and R^{11} are each independently lower alkyl or lower alkoxy (hereinafter referred to as "R^8 and R^{11} are R811-8"),

a compound wherein both of R^8 and R^{11} are optionally substituted lower alkyl or optionally substituted lower alkoxy (hereinafter referred to as "R^8 and R^{11} are R811-9"),

a compound wherein both of R^8 and R^{11} are lower alkyl, or one of R^8 and R^{11} is lower alkyl and the other is lower alkoxy (hereinafter referred to as "R^8 and R^{11} are R811-10"),

a compound wherein both of R^8 and R^{11} are lower alkyl (hereinafter referred to as "R^8 and R^{11} are R811-11"),

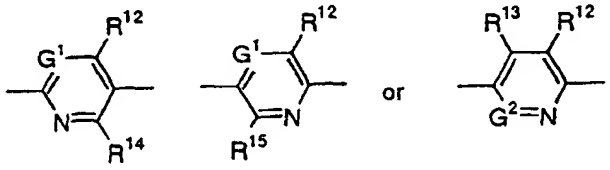
a compound wherein R^8 and R^{11} are each independently methyl or methoxy (hereinafter referred to as "R^8 and R^{11} are R811-12"),

a compound wherein R^9 and R^{10} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted cycloalkoxy, optionally substituted lower alkylthio, optionally substituted lower alkoxycarbonyl or optionally substituted lower alkylsulfonyloxy (hereinafter referred to as "R^9 and R^{10} are R910-1"),

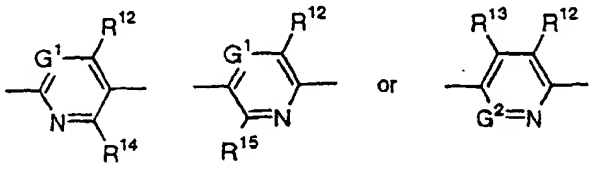
a compound wherein R^9 and R^{10} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, cycloalkoxy, lower alkylthio, lower alkoxycarbonyl or optionally substituted lower alkylsulfonyloxy (hereinafter referred to as "R^9 and R^{10} are R910-2"),

a compound wherein R^9 and R^{10} are each independently hydrogen, halogen, hydroxy, optionally substituted lower

alkyl, optionally substituted lower alkoxy or optionally substituted lower alkylsulfonyloxy (hereinafter referred to as "R^9 and R^{10} are R910-3"),
a compound wherein R^9 and R^{10} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl or optionally substituted lower alkoxy (hereinafter referred to as "R^9 and R^{10} are R910-4"),
a compound wherein R^9 and R^{10} are each independently hydrogen, optionally substituted lower alkyl or optionally substituted lower alkoxy (hereinafter referred to as "R^9 and R^{10} are R910-5"),
a compound wherein R^9 and R^{10} are each independently hydrogen or optionally substituted lower alkyl (hereinafter referred to as "R^9 and R^{10} are R910-6"),
a compound wherein both of R^9 and R^{10} are hydrogen or optionally substituted lower alkyl (hereinafter referred to as "R^9 and R^{10} are R910-7"),
a compound wherein both of R^9 and R^{10} are hydrogen or lower alkyl (hereinafter referred to as "R^9 and R^{10} are R910-8"),
a compound wherein both of R^9 and R^{10} are hydrogen (hereinafter referred to as "R^9 and R^{10} are R910-9"),
a compound wherein both of R^9 and R^{10} are lower alkyl (hereinafter referred to as "R^9 and R^{10} are R910-10"),
a compound wherein R^9 and R^{10} are each independently hydrogen or lower alkyl (hereinafter referred to as "R^9 and R^{10} are R910-11"),
a compound wherein C ring is 5- or 6-membered heterocycle which contains at least one N atom (hereinafter referred to as "C ring is C-1"),
a compound wherein C ring is a 6-membered heterocycle which contains at least one N atom (hereinafter referred to as "C ring is C-2"),
a compound wherein C ring is optionally substituted pyridine, optionally substituted pyrimidine, optionally substituted pyridazine or optionally substituted pyrazine (hereinafter referred to as "C ring is C-3"),
a compound wherein C ring is optionally substituted pyridine or optionally substituted pyrimidine (hereinafter referred to as "C ring is C-4"),
a compound wherein C ring is

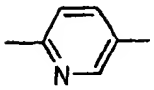


wherein G^1 is CR^{13} or N, G^2 is CR^{15} or N and R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy (hereinafter referred to as "C ring is C-5"),
a compound wherein C ring is



wherein G^1 is CR^{13} or N, G^2 is CR^{15} or N and R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen, hydroxy, lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkoxy, optionally substituted amino or nitro (hereinafter referred to as "C ring is C-6"),
a compound wherein C ring is C-5 and G^1 and G^2 are each independently CH or N (hereinafter referred to as "C ring is C-7"),
a compound wherein C ring is C-6 and G^1 and G^2 are each independently CH or N (hereinafter referred to as "C ring is C-8"),

a compound wherein C ring is



(hereinafter referred to as "C ring is C-9")
a compound wherein X and X' are -O-, $-CH_2-$, $-NR^1-$ (wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl) or -S(O)p- wherein p is an integer of 0 - 2,
Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted amino, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$ and Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$ provided that Y and Y' are not simultaneously hydrogen (hereinafter referred to as "X, X', Y and Y' are XY-1"),
a compound wherein X and X' are each independently -O-, $-CH_2-$, $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl or -S(O)p- wherein p is an integer of 0 - 2,
Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membetered heterocycle (hereinafter referred to as "X, X', Y and Y' are XY-2"),
a compound wherein one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl (hereinafter referred to as "X, X', Y and Y' are XY-3"),
a compound wherein one of X and X' is -O- and the other is -NH- (hereinafter referred to as "X, X', Y and Y' are XY-4"),
a compound wherein at least one of Y and Y' is prenyl (hereinafter referred to as "X, X', Y and Y' are XY-5"),
a compound wherein X and X' are each independently -O- or $-NR^1-$ wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X', Y and Y' are XY-6"),
a compound wherein one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl (hereinafter referred to as "X, X', Y and Y' are XY-7"),
a compound wherein one of X and X' is -O- and the other is -NH, Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X', Y and Y' are XY-8"),
a compound wherein one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl or lower alkenyl, Y and Y' are each independently optionally substituted lower alkyl, or optionally substituted lower alkenyl (hereinafter referred to as "X, X', Y and Y' are XY-9"),
a compound wherein one of X and X' is -O- and the other is -NH-, Y and Y' are each independently optionally substituted lower alkyl or optionally substituted lower alkenyl (hereinafter referred to as "X, X, Y and Y' are XY-10"),
a compound wherein one of X and X is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, one of Y and Y' is lower alkyl or lower alkenyl and the other is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X, Y and Y' are XY-11"),
a compound wherein one of X and X' is -O- and the other is -NH-, one of Y and Y' is lower alkyl or lower alkenyl and the other is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alky-

nyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X', Y and Y' are XY-12"),
a compound wherein one of X and X' is -O- and the other is -NR^1- wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, one of Y and Y' is lower alkyl or lower alkenyl and the other is hydrogen or optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl (hereinafter referred to as "X, X', Y and Y' are XY-13"),
a compound wherein one of X and X' is -O- and the other is -NH-, one of Y and Y' is lower alkyl or lower alkenyl and the other is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl (hereinafter referred to as "X, X', Y and Y' are XY-14"),
a compound wherein one of X and X' is -O- and the other is -NR^1- wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, one of Y and Y' is prenyl and the other is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X', Y and Y' are XY-15),
a compound wherein one of X and X' is -O- and the other is -NH-, one of Y and Y' is prenyl and the other is optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted cycloalkyl, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle (hereinafter referred to as "X, X', Y and Y are XY-16"), a compound wherein one of X and X' is -O- and the other is -NR^1- wherein R^1 is hydrogen, lower alkyl, lower alkenyl or optionally substituted lower alkoxycarbonyl, one of Y and Y' is prenyl and the other is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl (hereinafter referred to as "X, X', Y and Y' are XY-17"),
a compound wherein one of X and X' is -O- and the other is -NH-, one of Y and Y' is prenyl and the other is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl (hereinafter referred to as "X, X', Y and Y' are XY-18"),
a compound wherein one of -X-Y and -X'-Y' is optionally substituted lower alkylamino or optionally substituted lower alkenylamino and the other is optionally substituted lower alkoxy or optionally substituted lower alkenyloxy (hereinafter referred to as "X, X', Y and Y' are XY-19"),
a compound wherein one of -X-Y and -X'-Y' is optionally substituted lower alkylamino or optionally substituted lower alkenylamino and the other is prenyloxy (hereinafter referred to as "X, X', Y and Y' are XY-20"),
a compound wherein R^4 and R^5 are R45-1 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-1 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-2 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-2 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-3 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-3 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-4 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-4 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-5 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-5 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-6 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-6 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-7 and R^6 and R^7 are R67-1,
a compound wherein R^4 and R^5 are R45-7 and R^6 and R^7 are R67-2,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R210-7,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-10.
a compound wherein R^8 and R^{11} are R811-2 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-7,

a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-3 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-5 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-6 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-8 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-1,

a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-9 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-11 and R^9 and R^{10} are R910-11,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-1,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-2,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-3,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-4,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-5,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-6,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-7,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-8,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-9,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-10,
a compound wherein R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-11,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-1 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-7,

a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-2 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-1,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-2,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-3 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-1,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-2,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-8.
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-4 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-1,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-2,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-5 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-1,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-2,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-5,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-6 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-1.
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-2,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-3,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-4,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-5.

a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-6,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-7,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-8,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-9,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-10,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-11,
a compound wherein R^4 and R^5 are R45-7 and R^8 and R^{11} are R811-12,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-8.
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-5.
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-2, R^6 and R7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are

R910-4,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-2, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are

R910-5,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-7 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10 and R^9 and R^{10} are R910-8,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-3,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-4,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-5,
a compound wherein R^4 and R^5 are R45-4, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-12 and R^9 and R^{10} are R910-8,
a compound described in [1] wherein X' is -O-, -NR^1-, or -S(O)p- and C ring is an optionally substituted 5-membered heterocycle which contains one or two hetero atoms,
a compound wherein R^4 and R^5 are R45-4 and C ring is C-1,
a compound wherein R^8 and R^{11} are R811-9, R^9 and R^{10} are R910-7 and C ring is C-1.
a compound wherein R^4 and R^5 are R45-4 and C ring is C-2,
a compound wherein R^8 and R^{11} are R811-9, R^9 and R^{10} are R910-7 and C ring is C-2,
a compound wherein R^4 and R^5 are R45-4 and C ring is C-4,
a compound wherein R^8 and R^{11} are R811-9, R^9 and R^{10} are R910-7 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-3 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-4 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-5 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-7 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-7 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-7 and C ring is C-4,
a compound wherein X, Y, X' and Y are XY-7 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-7 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-7 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-2,

a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-8 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-9 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-10 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-11 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-12 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-2.
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-13 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-14 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-15 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-16 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-17 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-17 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-17 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-17 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-17 and C ring is C-8,

a compound wherein X, Y, X' and Y' are XY- 17 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY- 18 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-18 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-18 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-18 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-18 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-18 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-19 and C ring is C-9,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-2,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-3,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-4,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-6,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-8,
a compound wherein X, Y, X' and Y' are XY-20 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-C and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-6 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-6 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-

5, X, Y, X' and Y' are XY-5 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-3,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-9 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-9 and C ring is C-4,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-4,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-6 and C ring is C-9
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R311-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R37-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-4, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-

4, X, Y, X' and Y' are XY-5 and C ring is C-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R37-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-6,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-4, X, Y, Y' and Y' are XY-17 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-4,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-9 and C ring is C-4,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-5, X, Y', X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-6,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-8, R^9 and R^{10} are R910-

7, X, Y, X' and Y' are XY-6 and C ring is C-4,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-5 and C ring is C-9,
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a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-6,
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a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-9 and C ring is C-6,
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a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-4, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-5 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-6 and C ring is C-6,
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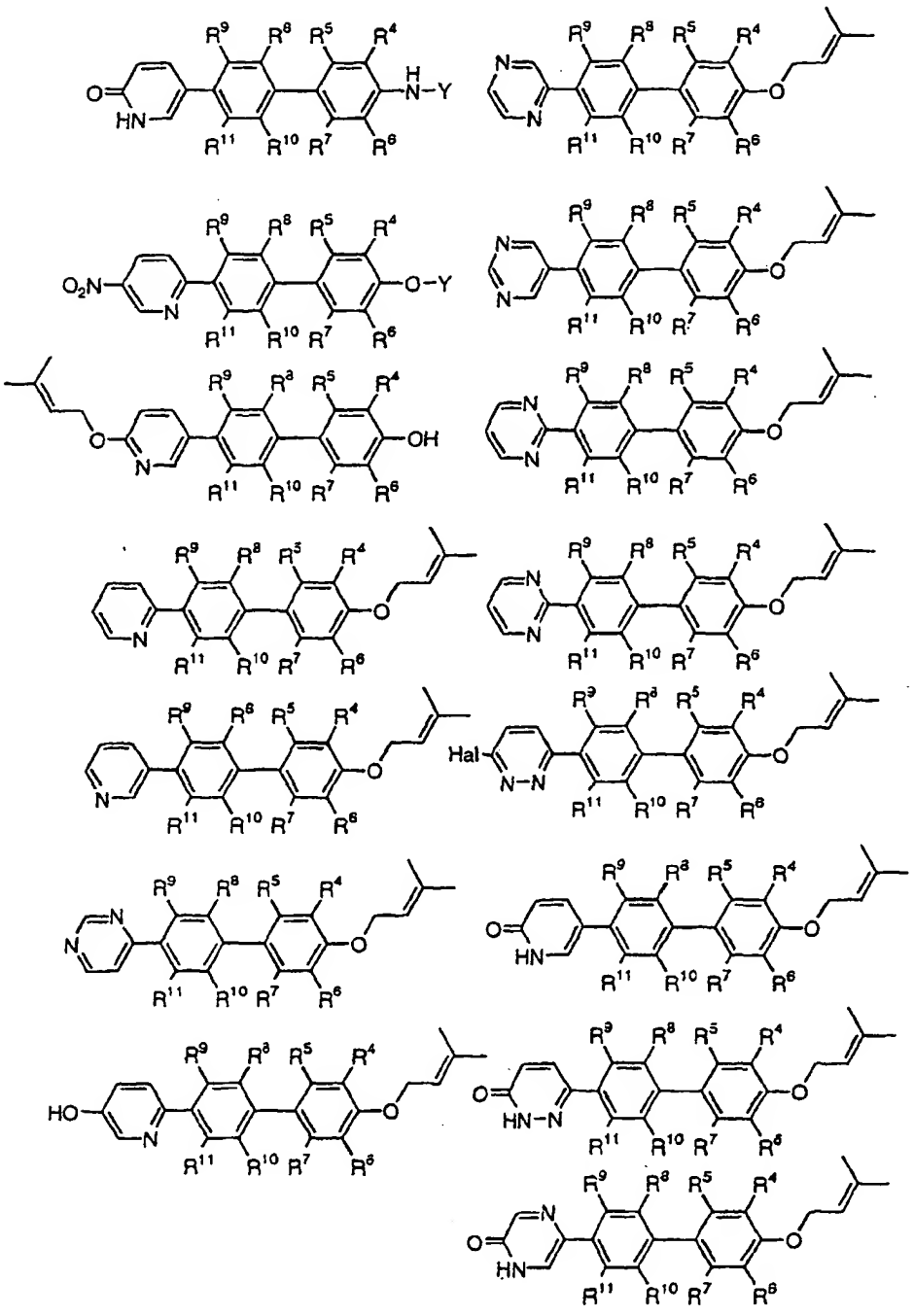
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-20 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-20 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-5, X, Y, X' and Y' are XY-20 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-

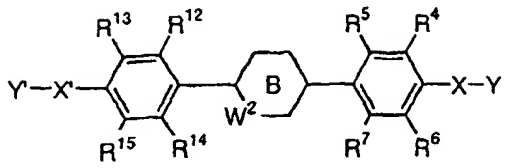
7, X, Y, X' and Y' are XY-5 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-5 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-6 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-6 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-6 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-9 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-17 and C ring is C-9,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-20 and C ring is C-4,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-20 and C ring is C-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^8 and R^{11} are R811-10, R^9 and R^{10} are R910-7, X, Y, X' and Y' are XY-20 and C ring is C-9,
a compound wherein X' is -O-, $-NR^1-$ or -S(O)p- and C ring is an optionally substituted 5-membered heterocycle which contains one or two hetero atoms,
a compound wherein C ring is pyridine ring, one of -X-Y and -X'-Y' is 1-pyrolidinyl, 1-piperidinyl, 4-morphorinyl, 4-thiomorpholinyl, optionally substituted 1-piperadinyl (wherein the substituents are lower alkyl or lower alkenyl) or optionally substituted 1-pyrolyl (wherein the substituents are lower alkyl), and the other is - $NHCH_2CH=CMe_2$, - $OCH_2CH=CMe_2$ or - $SCH_2CH=CMe_2$,
a compound wherein C ring is pyridine ring, one of -XY and -X'-Y' is 1-pyrolidinyl, optionally substituted 1-pyrolyl (wherein the substituents are lower alkyl), and the other is - $NHCH_2CH=CMe_2$, - $OCH_2CH=CMe_2$ or - $SCH_2CH=CMe_2$, salt or hydrate thereof.

Another embodiment of the present invention is
[2] a compound of the formula:



wherein each symbol is the same as defined in the above [1],

[3] a compound of the formula (Ia'):



Ia'

wherein B ring is optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms (wherein the substituent is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy, excluding a compound wherein B ring is substituted with only halogen(s)) and W^2 represents a bond when B ring is 5-membered heterocycle,

X, X', Y and Y' are the same defined in [1],

R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,

Y may be optionally substituted lower alkoxy when X is $-CH_2-$,

Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,

Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,

Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,

Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,

Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,

R^4, R^5, R^6, R^7, R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted alkenyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, optionally substituted carbamoyl, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy,

excluding

(i) a compound wherein Y and Y' are simultaneously hydrogen,

(ii) a compound wherein at least one of Y and Y' is optionally substituted acyl,

(iii) a compound wherein at least one of -X-Y and -X'-Y' is unsubstituted lower alkoxy, and

(iv) a compound wherein -X-Y and -X'-Y' are simultaneously optionally substituted lower alkoxy or amino substituted with phenyl.

salt or hydrate thereof.

The following compounds of (Ia'), salt or hydrate thereof are more preferable.

a compound wherein R^4 and R^5 are R45-1,

a compound wherein R^4 and R^5 are R45-2,

a compound wherein R^4 and R^5 are R45-3,

a compound wherein R^4 and R^5 are R45-4,

a compound wherein R^4 and R^5 are R45-5,

a compound wherein R^4 and R^5 are R45-6,

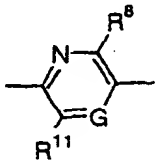
a compound wherein R^4 and R^5 are R45-7,

a compound wherein R^6 and R^7 are R67-1,

a compound wherein R^6 and R^7 are R67-2,

a compound wherein B ring is 5-or 6-membered heterocycle which contains at least one N atom (hereinafter

referred to as "B ring is B-1"),
a compound wherein B ring is a 6-membered heterocycle which contains at least one N atom (hereinafter referred to as "B ring is B-2"),
a compound wherein B ring is optionally substituted pyridine, optionally substituted pyrimidine, optionally substituted pyridazine or optionally substituted pyrazine (hereinafter referred to as "B ring is B-3"),
a compound wherein B ring is optionally substituted pyridine or optionally substituted pyrimidine (hereinafter referred to as "B ring is B-4"),
a compound wherein B ring is optionally substituted pyridine or optionally substituted pyrimidine (wherein the substituents are optionally substituted lower alkyl or optionally substituted lower alkoxy) (hereinafter referred to as "B ring is B-5"),
a compound wherein B ring is optionally substituted pyridine wherein "B ring is B-6"),
a compound wherein B ring is

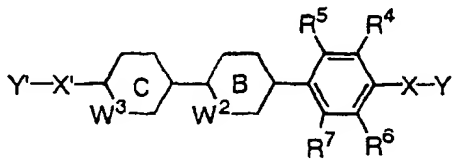


wherein G is CH or N, R^8 and R^{11} are each independently halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted acyloxy, carboxy or optionally substituted lower alkoxycarbonyl (hereinafter referred to as "B ring is B-7"),
a compound wherein R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, hydroxy, halogen, optionally substituted lower alkoxy, optionally substituted acyloxy, optionally substituted lower alkylsulfonyloxy or optionally substituted arylsulfonyloxy (hereinafter referred to as "R^{12}, R^{13}, R^{14}, R^{15} and R^{16} are R12-15-1"),
a compound wherein R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, hydroxy, halogen, lower alkoxy, acyloxy, optionally substituted lower alkylsulfonyloxy or arylsulfonyloxy (hereinafter referred to as "R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2"),
a compound wherein R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen or lower alkyl (hereinafter referred to as R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3"),
a compound wherein R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, chloro or fluoro (hereinafter referred to as R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4"),
a compound wherein X, Y, X' and Y are XY-1,
a compound wherein X, Y, X' and Y are XY-2,
a compound wherein X, Y, X' and Y are XY-3,
a compound wherein X, Y, X' and Y are XY-4,
a compound wherein X, Y, X' and Y are XY-5,
a compound wherein X, Y, X' and Y are XY-6,
a compound wherein X, Y, X' and Y are XY-7,
a compound wherein X, Y, X' and Y are XY-8,
a compound wherein X, Y, X' and Y are XY-9,
a compound wherein X, Y, X' and Y are XY-10,
a compound wherein X, Y, X' and Y are XY-11,
a compound wherein X, Y, X' and Y are XY-12,
a compound wherein X, Y, X' and Y are XY-13,
a compound wherein X, Y, X' and Y are XY-14,
a compound wherein X, Y, X' and Y are XY-15,
a compound wherein X, Y, X' and Y are XY-16,
a compound wherein X, Y, X' and Y are XY-17,
a compound wherein X, Y, X' and Y are XY-18,
a compound wherein X, Y, X' and Y are XY-19,
a compound wherein X, Y, X' and Y are XY-20,
a compound wherein R^4 and R^5 are R45-3 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-4 and R^6 and R^7 are R67-2,
a compound wherein R^4 and R^5 are R45-4 and B ring is B-1,

a compound wherein R^4 and R^5 are R45-4 and B ring is B-2,
a compound wherein R^4 and R^5 are R45-4 and B ring is B-4,
a compound wherein R^4 and R^5 are R45-4 and R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-7 and X, X', Y and Y are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-7 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-7 and X, X', Y' and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-1, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-4 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-7 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-2, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-

5 and X, X', Y and Y' are XY-5,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-5 and X, X', Y and Y' are XY-7,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-7 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-3, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-3 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-3 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-5 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-5 and X, X', Y and Y' are XY-17,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-7 and X, X', Y and Y' are XY-6,
a compound wherein R^4 and R^5 are R45-3, R^6 and R^7 are R67-1, R^{12}, R^{13}, R^{14} and R^{15} are R12-15-4, B ring is B-7 and X, X', Y and Y' are XY-17,
a compound wherein B ring is B-7, X and X' are each independently -O-, $-NR^1-$(wherein R^1 is hydrogen, lower alkyl, lower alkenyl or lower alkylcarbonyl) or - S(O)p- wherein p is an integer of 0-2.

Another embodiment of the present invention is
[4] a compounds of the formula (If'):



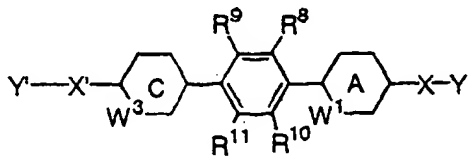
If'

wherein one of B ring and C ring is optionally substituted 5- or 8-membered heterocycle which contains one or two hetero atoms and the other is 6-membered heterocycle which contains at least one N atom, excluding a compound wherein every substituent of B ring is selected from cyano and halogen,
X, X', Y, Y' and W^3 are the same as defined in [1] and W^2 is the same as defined in [3],
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3 and R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
R^4, R^5, R^6 and R^7 are the same as defined in [1],
salt or hydrate thereof. The following compounds among the compound (If') are preferable.
a compound wherein B ring is B-2,
a compound wherein B ring is B-3,
a compound wherein B ring is B-4,
a compound wherein B ring is B-5,

a compound wherein B ring is B-6,
a compound wherein B ring is pyridine which may be substituted with lower alkyl or lower alkoxy,
a compound wherein C ring is C-1,
a compound wherein C ring is C-2,
a compound wherein C ring is optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring, optionally substituted triazole ring or optionally substituted pyridine ring,
a compound wherein C ring is optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring, optionally substituted triazole ring or optionally substituted pyridine ring (wherein the substituent is lower alkyl, aryl or lower alkenyloxy),
a compound wherein R^4, R^5, R^6 and R^7 are each independently hydrogen, hydroxy or lower alkylsulfonyloxy,
a compound wherein B ring is pyridine ring which may be substituted with lower alkyl or lower alkoxy, C ring is optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring, optionally substituted triazole ring or optionally substituted pyridine ring (wherein the substituents are lower alkyl, aryl or lower alkenyloxy) and R^4, R^5, R^6 and R^7 are each independently hydrogen, hydroxy or lower alkylsulfonyloxy.

Another embodiment of the present invention is

[5] a compound of the formula (Ig'):



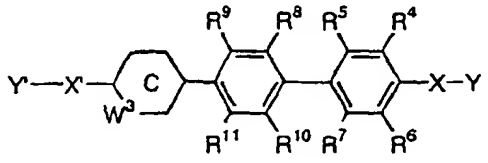
Ig'

wherein A ring and C ring are each independently optionally substituted 5- or 6-membered ring which contains one or two hetero atoms and W^1 is a bond when A ring is 5-membered heterocycle,
X, X' Y and Y' are the same as defined in [1],
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3 and R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
R^8, R^9, R^{10} and R^{11} are the same as defined in [1]
excluding a compound wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen,
salt or hydrate thereof. The following compounds among the compound (Ig') are preferable.
a compound wherein at least one of A ring and C ring is a 6-membered ring,
a compound wherein at least one of A ring and C ring is a 6-membered ring which contains N atom,
a compound wherein A ring is optionally substituted pyridine ring,
a compound wherein A ring is unsubstituted pyridine ring,
a compound wherein R^8, R^9, R^{10} and R^{11} are each independently hydrogen, lower alkyl or lower alkoxy,
a compound wherein C ring is optionally substituted pyridine ring, optionally substituted pyrimidine ring or optionally substituted pyrazine ring,
a compound wherein C ring is unsubstituted pyridine ring, unsubstituted pyrimidine ring or unsubstituted pyrazine ring,
a compound wherein -X-Y is lower alkenyloxy or lower alkenylamino,
a compound wherein -X'-Y' is amino which may be substituted with lower alkenyl,
a compound wherein A ring is unsubstituted pyridine ring, R^8, R^9, R^{10} and R^{11} are each independently hydrogen, lower alkyl or lower alkoxy, C ring is unsubstituted pyridine ring, unsubstituted pyrimidine ring or unsubstituted pyrazine ring, -X-Y is lower alkenyloxy or lower alkenylamino and -X'-Y' is amino which may be substituted with lower

alkenyl,
or salt or hydrate thereof.

Other preferable embodiments of the present invention are as follows.

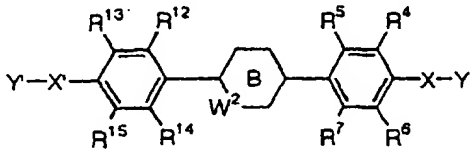
[6] A pharmaceutical composition for use as an immunosuppressant comprising the compound of the formula (Ib'):



Ib'

wherein C ring and W^3 are the same as defined in [1],
X and X' are each independently -O-, $-CH_2-$, $-NR^1-$ (wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl), -S(O)p- (wherein p is an integer of 0-2) or a bond, Y and Y' are the same as defined in [1],
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH, wherein m is 4 or 5, n is 2 or 3 and R' is hydrogen, lower alkyl or lower alkenyl,
Y may be lower alkoxy when X is $-CH_2-$,
Y' may be lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted tower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen, hydroxy, halogen, nitro or oxo when X' is a bond,
R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are the same as defined in [1],
excluding a compound wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen.
salt or hydrate thereof,

[7] a pharmaceutical composition for use as an immunosuppressant comprising the compound of the formula (Ia'):



Ia'

wherein B ring is optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms excluding a compound wherein every substituent of B ring is selected from cyano and halogen,
W^2 is a bond when B ring is 5-membered heterocycle,
X, X', Y and Y' are the same as defined in [3],
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3 and R' is hydrogen, lower alkyl or lower alkenyl.
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$, Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,

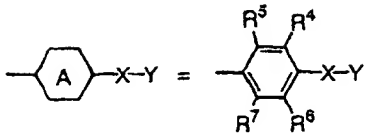
R^4, R^5, R^6, R^7, R^{12}, R^{13}, R^{14} and R^{15} are the same as defined in [3],
excluding

(i) a compound wherein -X-Y and -X'-Y' are simultaneously unsubstituted lower alkyl, optionally substituted lower alkoxy or unsubstituted acyloxy,
(ii) a compound wherein one of -X-Y- and -X'-Y' is methyl and the other is methoxy, and
(iii) a compound wherein -X'-Y' is hydrogen or halogen and -X-Y is unsubstituted lower alkyl, unsubstituted lower alkoxy or di(lower)alkylamino,

salt or hydrate thereof,
[8] a pharmaceutical composition for use as an immunosuppressant comprising the compound of the formula (If'), salt or hydrate thereof described in [4],
[9] a pharmaceutical composition for use as an immunosuppressant comprising the compound (Ig'), salt or hydrate thereof described in [5],
[10] a pharmaceutical composition for use as an antiallergic agent comprising the compound of the formula (If') described in [4], the compound of the formula (Ig') described in [5], the compound of the formula (Ib') described in [6], the compound of the formula (Ia') described in [7], salt, hydrate thereof,
[11] a pharmaceutical composition for use as a suppressant of the IgE production comprising the compound of the formula (If') described in [4], the compound of the formula (Ig') described in [5], the compound of the formula (Ib') described in [6], the compound of the formula (Ia') described in [7], salt, or hydrate thereof,
[12] Use of the compound of the formula (If') described in [4], the compound of the formula (Ig') described in [5], the compound of the formula (Ib') described in [6], the compound of the formula (Ia') described in [7], salt, or hydrate thereof for manufacturing a medicament for suppressing an immune response, treating and/or preventing allergic diseases,
[13] a method for suppressing an immune response or treating and/or preventing allergic diseases comprising administering the compound of the formula (If') described in [4], the compound of the formula (Ig') described in [5], the compound of the formula (Ib') described in [6], the compound of the formula (Ia') described in [7], salt, or hydrate thereof
and
[14] a method for treating and/or preventing allergic diseases comprising administering the compound of the formula (If') described in [4], the compound of the formula (Ig') described in [5], the compound of the formula (Ib') described in [6], the compound of the formula (Ia') described in [7], salt, or hydrate thereof.

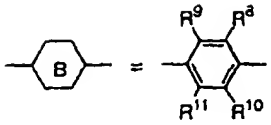
[0042] The preferable compounds of the present invention are the ones of following structures. The symbols A2, A5, ... B1, B4, ... T1, T2 ... in the tables means as follows.

Table 1



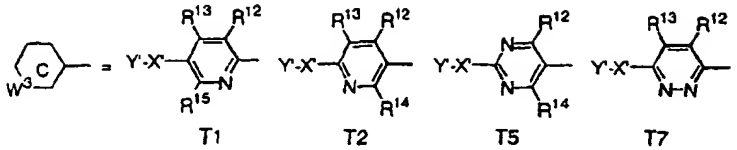
	R^4	R^5	R^6	R^7	X	Y
A2	H	H	H	H	O	CH_2-2-furyl
A5	H	H	H	H	O	$CH_2CH=CMe_2$
A35	OMe	H	H	H	O	$CH_2CH=CMe_2$
A37	F	H	H	H	O	$CH_2CH=CMe_2$
A45	H	H	H	H	NH	$CH_2CH=CH2$
A46	H	H	H	H	NH	$CH_2CH=CMe_2$
A49	H	H	H	H	NH	CH_2-c-Hex
A54	H	H	H	H	NH	CH_2-2-furyl
A66	H	F	H	H	NH	iBu
A67	H	F	H	H	NH	$CH_2CH=CMe_2$
A68	H	F	H	H	NH	cPent
A69	H	F	H	H	NH	cHex
A70	H	F	H	H	NH	CH_2cHex
A76	H	F	H	H	N-iPr	SO_2NHMe
A77	H	F	H	H	$NCH_2CH=CMe_2$	SO_2NHMe
A78	F	H	H	H	NH	$CH_2CH=CMe_2$
A106	H	F	H	H	NH	$CH_2C_6H_5$
A110	F	H	H	H	O	$CH_2C_6H_5$

Table 2



	R^8	R^9	R^{10}	R^{11}
B1	OMe	H	H	OMe
B4	Me	H	H	Me
B7	Me	Me	Me	Me
B8	Me	Me	OMe	Me
B9	Me	Me	OH	Me
B10	Me	Me	Me	OMe
B12	OMe	Me	Me	OMe
B14	Me	Me	H	Me
B16	Me	F	H	Me
B17	OMe	H	H	Me
B24	Me	Me	Me	COOMe
B28	Me	Me	Me	Cl
B29	Me	OMe	H	Me
B30	COOMe	Me	Me	Me
B31	Cl	Me	Me	Me
B32	H	Me	Me	Cl
B33	Me	H	Cl	Me
B34	H	Me	Cl	H
B35	Me	H	H	Cl
B36	Me	Me	H	H
B37	H	Me	H	Me
B38	Me	H	Me	H
B39	OMe	OMe	H	H
B40	H	OMe	H	OMe
B41	OMe	H	OMe	H
B42	H	Me	H	OMe
B43	OMe	H	Me	H

Table 3



T1 T2 T5 T7

	R^{12}	R^{13}	R^{14}	R^{15}		R^{12}	R^{13}	R^{14}	R^{15}
T1-1	H	H	–	H	T2-4	H	H	Me	–
T2-1	H	H	H	–	T2-5	H	NO_2	H	–
T2-2	Me	H	H	–	T5-1	H	–	H	–
T2-3	H	Me	H	–	T7-1	H	H	–	–

Table 4

T1-1	B1	A2	T2-1	B1	A2
T1-1	B1	A5	T2-1	B1	A5
T1-1	B1	A35	T2-1	B1	A35
T1-1	B1	A37	T2-1	B1	A37
T1-1	B1	A45	T2-1	B1	A45
T1-1	B1	A46	T2-1	B1	A46
T1-1	B1	A49	T2-1	B1	A49
T1-1	B1	A54	T2-1	B1	A54
T1-1	B1	A66	T2-1	B1	A66
T1-1	B1	A67	T2-1	B1	A67
T1-1	B1	A68	T2-1	B1	A68
T1-1	B1	A69	T2-1	B1	A69
T1-1	B1	A70	T2-1	B1	A70
T1-1	B1	A76	T2-1	B1	A76
T1-1	B1	A77	T2-1	B1	A77
T1-1	B1	A78	T2-1	B1	A78
T1-1	B1	A106	T2-1	B1	A106
T1-1	B1	A110	T2-1	B1	A110
T2-2	B1	A2	T2-3	B1	A2
T2-2	B1	A5	T2-3	B1	A5
T2-2	B1	A35	T2-3	B1	A35
T2-2	B1	A37	T2-3	B1	A37
T2-2	B1	A45	T2-3	B1	A45
T2-2	B1	A46	T2-3	B1	A46
T2-2	B1	A49	T2-3	B1	A49
T2-2	B1	A54	T2-3	B1	A54
T2-2	B1	A66	T2-3	B1	A66
T2-2	B1	A67	T2-3	B1	A67

Table 5

T2-2	B1	A68	T2-3	B1	A68
T2-2	B1	A69	T2-3	B1	A69
T2-2	B1	A70	T2-3	B1	A70
T2-2	B1	A76	T2-3	B1	A76
T2-2	B1	A77	T2-3	B1	A77
T2-2	B1	A78	T2-3	B1	A78
T2-2	B1	A106	T2-3	B1	A106
T2-2	B1	A110	T2-3	B1	A110
T2-4	B1	A2	T2-5	B1	A2
T2-4	B1	A5	T2-5	B1	A5
T2-4	B1	A35	T2-5	B1	A35
T2-4	B1	A37	T2-5	B1	A37
T2-4	B1	A45	T2-5	B1	A45
T2-4	B1	A46	T2-5	B1	A46
T2-4	B1	A49	T2-5	B1	A49
T2-4	B1	A54	T2-5	B1	A54
T2-4	B1	A66	T2-5	B1	A66
T2-4	B1	A67	T2-5	B1	A67
T2-4	B1	A68	T2-5	B1	A68
T2-4	B1	A69	T2-5	B1	A69
T2-4	B1	A70	T2-5	B1	A70
T2-4	B1	A76	T2-5	B1	A76
T2-4	B1	A77	T2-5	B1	A77
T2-4	B1	A78	T2-5	B1	A78
T2-4	B1	A106	T2-5	B1	A106
T2-4	B1	A110	T2-5	B1	A110
T5-1	B1	A2	T7-1	B1	A2
T5-1	B1	A5	T7-1	B1	A5
T5-1	B1	A35	T7-1	B1	A35
T5-1	B1	A37	T7-1	B1	A37
T5-1	B1	A45	T7-1	B1	A45
T5-1	B1	A46	T7-1	B1	A46
T5-1	B1	A49	T7-1	B1	A49
T5-1	B1	A54	T7-1	B1	A54
T5-1	B1	A66	T7-1	B1	A66
T5-1	B1	A67	T7-1	B1	A67
T5-1	B1	A68	T7-1	B1	A68
T5-1	B1	A69	T7-1	B1	A69
T5-1	B1	A70	T7-1	B1	A70
T5-1	B1	A76	T7-1	B1	A76
T5-1	B1	A77	T7-1	B1	A77
T5-1	B1	A78	T7-1	B1	A78
T5-1	B1	A106	T7-1	B1	A106
T5-1	B1	A110	T7-1	B1	A110

Table 6

T1-1	B4	A2	T2-1	B4	A2
T1-1	B4	A5	T2-1	B4	A5
T1-1	B4	A35	T2-1	B4	A35
T1-1	B4	A37	T2-1	B4	A37
T1-1	B4	A45	T2-1	B4	A45
T1-1	B4	A46	T2-1	B4	A46
T1-1	B4	A49	T2-1	B4	A49
T1-1	B4	A54	T2-1	B4	A54
T1-1	B4	A66	T2-1	B4	A66
T1-1	B4	A67	T2-1	B4	A67
T1-1	B4	A68	T2-1	B4	A68
T1-1	B4	A69	T2-1	B4	A69
T1-1	B4	A70	T2-1	B4	A70
T1-1	B4	A76	T2-1	B4	A76
T1-1	B4	A77	T2-1	B4	A77
T1-1	B4	A78	T2-1	B4	A78
T1-1	B4	A106	T2-1	B4	A106
T1-1	B4	A110	T2-1	B4	A110
T2-2	B4	A2	T2-3	B4	A2
T2-2	B4	A5	T2-3	B4	A5
T2-2	B4	A35	T2-3	B4	A35
T2-2	B4	A37	T2-3	B4	A37
T2-2	B4	A45	T2-3	B4	A45
T2-2	B4	A46	T2-3	B4	A46
T2-2	B4	A49	T2-3	B4	A49
T2-2	B4	A54	T2-3	B4	A54
T2-2	B4	A66	T2-3	B4	A66
T2-2	B4	A67	T2-3	B4	A67
T2-2	B4	A68	T2-3	B4	A68
T2-2	B4	A69	T2-3	B4	A69
T2-2	B4	A70	T2-3	B4	A70
T2-2	B4	A76	T2-3	B4	A76
T2-2	B4	A77	T2-3	B4	A77
T2-2	B4	A78	T2-3	B4	A78
T2-2	B4	A106	T2-3	B4	A106
T2-2	B4	A110	T2-3	B4	A110
T2-4	B4	A2	T2-5	B4	A2
T2-4	B4	A5	T2-5	B4	A5
T2-4	B4	A35	T2-5	B4	A35
T2-4	B4	A37	T2-5	B4	A37
T2-4	B4	A45	T2-5	B4	A45
T2-4	B4	A46	T2-5	B4	A46
T2-4	B4	A49	T2-5	B4	A49
T2-4	B4	A54	T2-5	B4	A54

Table 7

T2-4	B4	A66	T2-5	B4	A66
T2-4	B4	A67	T2-5	B4	A67
T2-4	B4	A68	T2-5	B4	A68
T2-4	B4	A69	T2-5	B4	A69
T2-4	B4	A70	T2-5	B4	A70
T2-4	B4	A76	T2-5	B4	A76
T2-4	B4	A77	T2-5	B4	A77
T2-4	B4	A78	T2-5	B4	A78
T2-4	B4	A106	T2-5	B4	A106
T2-4	B4	A110	T2-5	B4	A110
T5-1	B4	A2	T7-1	B4	A2
T5-1	B4	A5	T7-1	B4	A5
T5-1	B4	A35	T7-1	B4	A35
T5-1	B4	A37	T7-1	B4	A37
T5-1	B4	A45	T7-1	B4	A45
T5-1	B4	A46	T7-1	B4	A46
T5-1	B4	A49	T7-1	B4	A49
T5-1	B4	A54	T7-1	B4	A54
T5-1	B4	A66	T7-1	B4	A66
T5-1	B4	A67	T7-1	B4	A67
T5-1	B4	A68	T7-1	B4	A68
T5-1	B4	A69	T7-1	B4	A69
T5-1	B4	A70	T7-1	B4	A70
T5-1	B4	A76	T7-1	B4	A76
T5-1	B4	A77	T7-1	B4	A77
T5-1	B4	A78	T7-1	B4	A78
T5-1	B4	A106	T7-1	B4	A106
T5-1	B4	A110	T7-1	B4	A110
T1-1	B7	A2	T2-1	B7	A2
T1-1	B7	A5	T2-1	B7	A5
T1-1	B7	A35	T2-1	B7	A35
T1-1	B7	A37	T2-1	B7	A37
T1-1	B7	A45	T2-1	B7	A45
T1-1	B7	A46	T2-1	B7	A46
T1-1	B7	A49	T2-1	B7	A49
T1-1	B7	A54	T2-1	B7	A54
T1-1	B7	A66	T2-1	B7	A66
T1-1	B7	A67	T2-1	B7	A67
T1-1	B7	A68	T2-1	B7	A68
T1-1	B7	A69	T2-1	B7	A69
T1-1	B7	A70	T2-1	B7	A70
T1-1	B7	A76	T2-1	B7	A76
T1-1	B7	A77	T2-1	B7	A77
T1-1	B7	A78	T2-1	B7	A78

Table 8

T1-1	B7	A106	T2-1	B7	A106
T1-1	B7	A110	T2-1	B7	A110
T2-2	B7	A2	T2-3	B7	A2
T2-2	B7	A5	T2-3	B7	A5
T2-2	B7	A35	T2-3	B7	A35
T2-2	B7	A37	T2-3	B7	A37
T2-2	B7	A45	T2-3	B7	A45
T2-2	B7	A46	T2-3	B7	A46
T2-2	B7	A49	T2-3	B7	A49
T2-2	B7	A54	T2-3	B7	A54
T2-2	B7	A66	T2-3	B7	A66
T2-2	B7	A67	T2-3	B7	A67
T2-2	B7	A68	T2-3	B7	A68
T2-2	B7	A69	T2-3	B7	A69
T2-2	B7	A70	T2-3	B7	A70
T2-2	B7	A76	T2-3	B7	A76
T2-2	B7	A77	T2-3	B7	A77
T2-2	B7	A78	T2-3	B7	A78
T2-2	B7	A106	T2-3	B7	A106
T2-2	B7	A110	T2-3	B7	A110
T2-4	B7	A2	T2-5	B7	A2
T2-4	B7	A5	T2-5	B7	A5
T2-4	B7	A35	T2-5	B7	A35
T2-4	B7	A37	T2-5	B7	A37
T2-4	B7	A45	T2-5	B7	A45
T2-4	B7	A46	T2-5	B7	A46
T2-4	B7	A49	T2-5	B7	A49
T2-4	B7	A54	T2-5	B7	A54
T2-4	B7	A66	T2-5	B7	A66
T2-4	B7	A67	T2-5	B7	A67
T2-4	B7	A68	T2-5	B7	A68
T2-4	B7	A69	T2-5	B7	A69
T2-4	B7	A70	T2-5	B7	A70
T2-4	B7	A76	T2-5	B7	A76
T2-4	B7	A77	T2-5	B7	A77
T2-4	B7	A78	T2-5	B7	A78
T2-4	B7	A106	T2-5	B7	A106
T2-4	B7	A110	T2-5	B7	A110
T5-1	B7	A2	T7-1	B7	A2
T5-1	B7	A5	T7-1	B7	A5
T5-1	B7	A35	T7-1	B7	A35
T5-1	B7	A37	T7-1	B7	A37
T5-1	B7	A45	T7-1	B7	A45

Table 9

T5-1	B7	A46	T7-1	B7	A46
T5-1	B7	A49	T7-1	B7	A49
T5-1	B7	A54	T7-1	B7	A54
T5-1	B7	A66	T7-1	B7	A66
T5-1	B7	A67	T7-1	B7	A67
T5-1	B7	A68	T7-1	B7	A68
T5-1	B7	A69	T7-1	B7	A69
T5-1	B7	A70	T7-1	B7	A70
T5-1	B7	A76	T7-1	B7	A76
T5-1	B7	A77	T7-1	B7	A77
T5-1	B7	A78	T7-1	B7	A78
T5-1	B7	A106	T7-1	B7	A106
T5-1	B7	A110	T7-1	B7	A110
T1-1	B8	A2	T2-1	B8	A2
T1-1	B8	A5	T2-1	B8	A5
T1-1	B8	A35	T2-1	B8	A35
T1-1	B8	A37	T2-1	B8	A37
T1-1	B8	A45	T2-1	B8	A45
T1-1	B8	A46	T2-1	B8	A46
T1-1	B8	A49	T2-1	B8	A49
T1-1	B8	A54	T2-1	B8	A54
T1-1	B8	A66	T2-1	B8	A66
T1-1	B8	A67	T2-1	B8	A67
T1-1	B8	A68	T2-1	B8	A68
T1-1	B8	A69	T2-1	B8	A69
T1-1	B8	A70	T2-1	B8	A70
T1-1	B8	A76	T2-1	B8	A76
T1-1	B8	A77	T2-1	B8	A77
T1-1	B8	A78	T2-1	B8	A78
T1-1	B8	A106	T2-1	B8	A106
T1-1	B8	A110	T2-1	B8	A110
T2-2	B8	A2	T2-3	B8	A2
T2-2	B8	A5	T2-3	B8	A5
T2-2	B8	A35	T2-3	B8	A35
T2-2	B8	A37	T2-3	B8	A37
T2-2	B8	A45	T2-3	B8	A45
T2-2	B8	A46	T2-3	B8	A46
T2-2	B8	A49	T2-3	B8	A49
T2-2	B8	A54	T2-3	B8	A54
T2-2	B8	A66	T2-3	B8	A66
T2-2	B8	A67	T2-3	B8	A67
T2-2	B8	A68	T2-3	B8	A68
T2-2	B8	A69	T2-3	B8	A69

Table 10

T2-2	B8	A70	T2-3	B8	A70
T2-2	B8	A76	T2-3	B8	A76
T2-2	B8	A77	T2-3	B8	A77
T2-2	B8	A78	T2-3	B8	A78
T2-2	B8	A106	T2-3	B8	A106
T2-2	B8	A110	T2-3	B8	A110
T2-4	B8	A2	T2-5	B8	A2
T2-4	B8	A5	T2-5	B8	A5
T2-4	B8	A35	T2-5	B8	A35
T2-4	B8	A37	T2-5	B8	A37
T2-4	B8	A45	T2-5	B8	A45
T2-4	B8	A46	T2-5	B8	A46
T2-4	B8	A49	T2-5	B8	A49
T2-4	B8	A54	T2-5	B8	A54
T2-4	B8	A66	T2-5	B8	A66
T2-4	B8	A67	T2-5	B8	A67
T2-4	B8	A68	T2-5	B8	A68
T2-4	B8	A69	T2-5	B8	A69
T2-4	B8	A70	T2-5	B8	A70
T2-4	B8	A76	T2-5	B8	A76
T2-4	B8	A77	T2-5	B8	A77
T2-4	B8	A78	T2-5	B8	A78
T2-4	B8	A106	T2-5	B8	A106
T2-4	B8	A110	T2-5	B8	A110
T5-1	B8	A2	T7-1	B8	A2
T5-1	B8	A5	T7-1	B8	A5
T5-1	B8	A35	T7-1	B8	A35
T5-1	B8	A37	T7-1	B8	A37
T5-1	B8	A45	T7-1	B8	A45
T5-1	B8	A46	T7-1	B8	A46
T5-1	B8	A49	T7-1	B8	A49
T5-1	B8	A54	T7-1	B8	A54
T5-1	B8	A66	T7-1	B8	A66
T5-1	B8	A67	T7-1	B8	A67
T5-1	B8	A68	T7-1	B8	A68
T5-1	B8	A69	T7-1	B8	A69
T5-1	B8	A70	T7-1	B8	A70
T5-1	B8	A76	T7-1	B8	A76
T5-1	B8	A77	T7-1	B8	A77
T5-1	B8	A78	T7-1	B8	A78
T5-1	B8	A106	T7-1	B8	A106
T5-1	B8	A110	T7-1	B8	A110
T1-1	B9	A2	T2-1	B9	A2

Table 11

T1-1	B9	A5	T2-1	B9	A5
T1-1	B9	A35	T2-1	B9	A35
T1-1	B9	A37	T2-1	B9	A37
T1-1	B9	A45	T2-1	B9	A45
T1-1	B9	A46	T2-1	B9	A46
T1-1	B9	A49	T2-1	B9	A49
T1-1	B9	A54	T2-1	B9	A54
T1-1	B9	A66	T2-1	B9	A66
T1-1	B9	A67	T2-1	B9	A67
T1-1	B9	A68	T2-1	B9	A68
T1-1	B9	A69	T2-1	B9	A69
T1-1	B9	A70	T2-1	B9	A70
T1-1	B9	A76	T2-1	B9	A76
T1-1	B9	A77	T2-1	B9	A77
T1-1	B9	A78	T2-1	B9	A78
T1-1	B9	A106	T2-1	B9	A106
T1-1	B9	A110	T2-1	B9	A110
T2-2	B9	A2	T2-3	B9	A2
T2-2	B9	A5	T2-3	B9	A5
T2-2	B9	A35	T2-3	B9	A35
T2-2	B9	A37	T2-3	B9	A37
T2-2	B9	A45	T2-3	B9	A45
T2-2	B9	A46	T2-3	B9	A46
T2-2	B9	A49	T2-3	B9	A49
T2-2	B9	A54	T2-3	B9	A54
T2-2	B9	A66	T2-3	B9	A66
T2-2	B9	A67	T2-3	B9	A67
T2-2	B9	A68	T2-3	B9	A68
T2-2	B9	A69	T2-3	B9	A69
T2-2	B9	A70	T2-3	B9	A70
T2-2	B9	A76	T2-3	B9	A76
T2-2	B9	A77	T2-3	B9	A77
T2-2	B9	A78	T2-3	B9	A78
T2-2	B9	A106	T2-3	B9	A106
T2-2	B9	A110	T2-3	B9	A110
T2-4	B9	A2	T2-5	B9	A2
T2-4	B9	A5	T2-5	B9	A5
T2-4	B9	A35	T2-5	B9	A35
T2-4	B9	A37	T2-5	B9	A37
T2-4	B9	A45	T2-5	B9	A45
T2-4	B9	A46	T2-5	B9	A46
T2-4	B9	A49	T2-5	B9	A49
T2-4	B9	A54	T2-5	B9	A54

Table 12

T2-4	B9	A66	T2-5	B9	A66
T2-4	B9	A67	T2-5	B9	A67
T2-4	B9	A68	T2-5	B9	A68
T2-4	B9	A69	T2-5	B9	A69
T2-4	B9	A70	T2-5	B9	A70
T2-4	B9	A76	T2-5	B9	A76
T2-4	B9	A77	T2-5	B9	A77
T2-4	B9	A78	T2-5	B9	A78
T2-4	B9	A106	T2-5	B9	A106
T2-4	B9	A110	T2-5	B9	A110
T5-1	B9	A2	T7-1	B9	A2
T5-1	B9	A5	T7-1	B9	A5
T5-1	B9	A35	T7-1	B9	A35
T5-1	B9	A37	T7-1	B9	A37
T5-1	B9	A45	T7-1	B9	A45
T5-1	B9	A46	T7-1	B9	A46
T5-1	B9	A49	T7-1	B9	A49
T5-1	B9	A54	T7-1	B9	A54
T5-1	B9	A66	T7-1	B9	A66
T5-1	B9	A67	T7-1	B9	A67
T5-1	B9	A68	T7-1	B9	A68
T5-1	B9	A69	T7-1	B9	A69
T5-1	B9	A70	T7-1	B9	A70
T5-1	B9	A76	T7-1	B9	A76
T5-1	B9	A77	T7-1	B9	A77
T5-1	B9	A78	T7-1	B9	A78
T5-1	B9	A106	T7-1	B9	A106
T5-1	B9	A110	T7-1	B9	A110
T1-1	B10	A2	T2-1	B10	A2
T1-1	B10	A5	T2-1	B10	A5
T1-1	B10	A35	T2-1	B10	A35
T1-1	B10	A37	T2-1	B10	A37
T1-1	B10	A45	T2-1	B10	A45
T1-1	B10	A46	T2-1	B10	A46
T1-1	B10	A49	T2-1	B10	A49
T1-1	B10	A54	T2-1	B10	A54
T1-1	B10	A66	T2-1	B10	A66
T1-1	B10	A67	T2-1	B10	A67
T1-1	B10	A68	T2-1	B10	A68
T1-1	B10	A69	T2-1	B10	A69
T1-1	B10	A70	T2-1	B10	A70
T1-1	B10	A76	T2-1	B10	A76
T1-1	B10	A77	T2-1	B10	A77
T1-1	B10	A78	T2-1	B10	A78

Table 13

T1-1	B10	A106	T2-1	B10	A106
T1-1	B10	A110	T2-1	B10	A110
T2-2	B10	A2	T2-3	B10	A2
T2-2	B10	A5	T2-3	B10	A5
T2-2	B10	A35	T2-3	B10	A35
T2-2	B10	A37	T2-3	B10	A37
T2-2	B10	A45	T2-3	B10	A45
T2-2	B10	A46	T2-3	B10	A46
T2-2	B10	A49	T2-3	B10	A49
T2-2	B10	A54	T2-3	B10	A54
T2-2	B10	A66	T2-3	B10	A66
T2-2	B10	A67	T2-3	B10	A67
T2-2	B10	A68	T2-3	B10	A68
T2-2	B10	A69	T2-3	B10	A69
T2-2	B10	A70	T2-3	B10	A70
T2-2	B10	A76	T2-3	B10	A76
T2-2	B10	A77	T2-3	B10	A77
T2-2	B10	A78	T2-3	B10	A78
T2-2	B10	A106	T2-3	B10	A106
T2-2	B10	A110	T2-3	B10	A110
T2-4	B10	A2	T2-5	B10	A2
T2-4	B10	A5	T2-5	B10	A5
T2-4	B10	A35	T2-5	B10	A35
T2-4	B10	A37	T2-5	B10	A37
T2-4	B10	A45	T2-5	B10	A45
T2-4	B10	A46	T2-5	B10	A46
T2-4	B10	A49	T2-5	B10	A49
T2-4	B10	A54	T2-5	B10	A54
T2-4	B10	A66	T2-5	B10	A66
T2-4	B10	A67	T2-5	B10	A67
T2-4	B10	A68	T2-5	B10	A68
T2-4	B10	A69	T2-5	B10	A69
T2-4	B10	A70	T2-5	B10	A70
T2-4	B10	A76	T2-5	B10	A76
T2-4	B10	A77	T2-5	B10	A77
T2-4	B10	A78	T2-5	B10	A78
T2-4	B10	A106	T2-5	B10	A106
T2-4	B10	A110	T2-5	B10	A110
T5-1	B10	A2	T7-1	B10	A2
T5-1	B10	A5	T7-1	B10	A5
T5-1	B10	A35	T7-1	B10	A35
T5-1	B10	A37	T7-1	B10	A37
T5-1	B10	A45	T7-1	B10	A45

Table 14

T5-1	B10	A46	T7-1	B10	A46
T5-1	B10	A49	T7-1	B10	A49
T5-1	B10	A54	T7-1	B10	A54
T5-1	B10	A66	T7-1	B10	A66
T5-1	B10	A67	T7-1	B10	A67
T5-1	B10	A68	T7-1	B10	A68
T5-1	B10	A69	T7-1	B10	A69
T5-1	B10	A70	T7-1	B10	A70
T5-1	B10	A76	T7-1	B10	A76
T5-1	B10	A77	T7-1	B10	A77
T5-1	B10	A78	T7-1	B10	A78
T5-1	B10	A106	T7-1	B10	A106
T5-1	B10	A110	T7-1	B10	A110
T1-1	B12	A2	T2-1	B12	A2
T1-1	B12	A5	T2-1	B12	A5
T1-1	B12	A35	T2-1	B12	A35
T1-1	B12	A37	T2-1	B12	A37
T1-1	B12	A45	T2-1	B12	A45
T1-1	B12	A46	T2-1	B12	A46
T1-1	B12	A49	T2-1	B12	A49
T1-1	B12	A54	T2-1	B12	A54
T1-1	B12	A66	T2-1	B12	A66
T1-1	B12	A67	T2-1	B12	A67
T1-1	B12	A68	T2-1	B12	A68
T1-1	B12	A69	T2-1	B12	A69
T1-1	B12	A70	T2-1	B12	A70
T1-1	B12	A76	T2-1	B12	A76
T1-1	B12	A77	T2-1	B12	A77
T1-1	B12	A78	T2-1	B12	A78
T1-1	B12	A106	T2-1	B12	A106
T1-1	B12	A110	T2-1	B12	A110
T2-2	B12	A2	T2-3	B12	A2
T2-2	B12	A5	T2-3	B12	A5
T2-2	B12	A35	T2-3	B12	A35
T2-2	B12	A37	T2-3	B12	A37
T2-2	B12	A45	T2-3	B12	A45
T2-2	B12	A46	T2-3	B12	A46
T2-2	B12	A49	T2-3	B12	A49
T2-2	B12	A54	T2-3	B12	A54
T2-2	B12	A66	T2-3	B12	A66
T2-2	B12	A67	T2-3	B12	A67
T2-2	B12	A68	T2-3	B12	A68
T2-2	B12	A69	T2-3	B12	A69

Table 15

T2-2	B12	A70	T2-3	B12	A70
T2-2	B12	A76	T2-3	B12	A76
T2-2	B12	A77	T2-3	B12	A77
T2-2	B12	A78	T2-3	B12	A78
T2-2	B12	A106	T2-3	B12	A106
T2-2	B12	A110	T2-3	B12	A110
T2-4	B12	A2	T2-5	B12	A2
T2-4	B12	A5	T2-5	B12	A5
T2-4	B12	A35	T2-5	B12	A35
T2-4	B12	A37	T2-5	B12	A37
T2-4	B12	A45	T2-5	B12	A45
T2-4	B12	A46	T2-5	B12	A46
T2-4	B12	A49	T2-5	B12	A49
T2-4	B12	A54	T2-5	B12	A54
T2-4	B12	A66	T2-5	B12	A66
T2-4	B12	A67	T2-5	B12	A67
T2-4	B12	A68	T2-5	B12	A68
T2-4	B12	A69	T2-5	B12	A69
T2-4	B12	A70	T2-5	B12	A70
T2-4	B12	A76	T2-5	B12	A76
T2-4	B12	A77	T2-5	B12	A77
T2-4	B12	A78	T2-5	B12	A78
T2-4	B12	A106	T2-5	B12	A106
T2-4	B12	A110	T2-5	B12	A110
T5-1	B12	A2	T7-1	B12	A2
T5-1	B12	A5	T7-1	B12	A5
T5-1	B12	A35	T7-1	B12	A35
T5-1	B12	A37	T7-1	B12	A37
T5-1	B12	A45	T7-1	B12	A45
T5-1	B12	A46	T7-1	B12	A46
T5-1	B12	A49	T7-1	B12	A49
T5-1	B12	A54	T7-1	B12	A54
T5-1	B12	A66	T7-1	B12	A66
T5-1	B12	A67	T7-1	B12	A67
T5-1	B12	A68	T7-1	B12	A68
T5-1	B12	A69	T7-1	B12	A69
T5-1	B12	A70	T7-1	B12	A70
T5-1	B12	A76	T7-1	B12	A76
T5-1	B12	A77	T7-1	B12	A77
T5-1	B12	A78	T7-1	B12	A78
T5-1	B12	A106	T7-1	B12	A106
T5-1	B12	A110	T7-1	B12	A110
T1-1	B14	A2	T2-1	B14	A2

Table 16

T1-1	B14	A5	T2-1	B14	A5
T1-1	B14	A35	T2-1	B14	A35
T1-1	B14	A37	T2-1	B14	A37
T1-1	B14	A45	T2-1	B14	A45
T1-1	B14	A46	T2-1	B14	A46
T1-1	B14	A49	T2-1	B14	A49
T1-1	B14	A54	T2-1	B14	A54
T1-1	B14	A66	T2-1	B14	A66
T1-1	B14	A67	T2-1	B14	A67
T1-1	B14	A68	T2-1	B14	A68
T1-1	B14	A69	T2-1	B14	A69
T1-1	B14	A70	T2-1	B14	A70
T1-1	B14	A76	T2-1	B14	A76
T1-1	B14	A77	T2-1	B14	A77
T1-1	B14	A78	T2-1	B14	A78
T1-1	B14	A106	T2-1	B14	A106
T1-1	B14	A110	T2-1	B14	A110
T2-2	B14	A2	T2-3	B14	A2
T2-2	B14	A5	T2-3	B14	A5
T2-2	B14	A35	T2-3	B14	A35
T2-2	B14	A37	T2-3	B14	A37
T2-2	B14	A45	T2-3	B14	A45
T2-2	B14	A46	T2-3	B14	A46
T2-2	B14	A49	T2-3	B14	A49
T2-2	B14	A54	T2-3	B14	A54
T2-2	B14	A66	T2-3	B14	A66
T2-2	B14	A67	T2-3	B14	A67
T2-2	B14	A68	T2-3	B14	A68
T2-2	B14	A69	T2-3	B14	A69
T2-2	B14	A70	T2-3	B14	A70
T2-2	B14	A76	T2-3	B14	A76
T2-2	B14	A77	T2-3	B14	A77
T2-2	B14	A78	T2-3	B14	A78
T2-2	B14	A106	T2-3	B14	A106
T2-2	B14	A110	T2-3	B14	A110
T2-4	B14	A2	T2-5	B14	A2
T2-4	B14	A5	T2-5	B14	A5
T2-4	B14	A35	T2-5	B14	A35
T2-4	B14	A37	T2-5	B14	A37
T2-4	B14	A45	T2-5	B14	A45
T2-4	B14	A46	T2-5	B14	A46
T2-4	B14	A49	T2-5	B14	A49
T2-4	B14	A54	T2-5	B14	A54

Table 17

T2-4	B14	A66	T2-5	B14	A66
T2-4	B14	A67	T2-5	B14	A67
T2-4	B14	A68	T2-5	B14	A68
T2-4	B14	A69	T2-5	B14	A69
T2-4	B14	A70	T2-5	B14	A70
T2-4	B14	A76	T2-5	B14	A76
T2-4	B14	A77	T2-5	B14	A77
T2-4	B14	A78	T2-5	B14	A78
T2-4	B14	A106	T2-5	B14	A106
T2-4	B14	A110	T2-5	B14	A110
T5-1	B14	A2	T7-1	B14	A2
T5-1	B14	A5	T7-1	B14	A5
T5-1	B14	A35	T7-1	B14	A35
T5-1	B14	A37	T7-1	B14	A37
T5-1	B14	A45	T7-1	B14	A45
T5-1	B14	A46	T7-1	B14	A46
T5-1	B14	A49	T7-1	B14	A49
T5-1	B14	A54	T7-1	B14	A54
T5-1	B14	A66	T7-1	B14	A66
T5-1	B14	A67	T7-1	B14	A67
T5-1	B14	A68	T7-1	B14	A68
T5-1	B14	A69	T7-1	B14	A69
T5-1	B14	A70	T7-1	B14	A70
T5-1	B14	A76	T7-1	B14	A76
T5-1	B14	A77	T7-1	B14	A77
T5-1	B14	A78	T7-1	B14	A78
T5-1	B14	A106	T7-1	B14	A106
T5-1	B14	A110	T7-1	B14	A110
T1-1	B16	A2	T2-1	B16	A2
T1-1	B16	A5	T2-1	B16	A5
T1-1	B16	A35	T2-1	B16	A35
T1-1	B16	A37	T2-1	B16	A37
T1-1	B16	A45	T2-1	B16	A45
T1-1	B16	A46	T2-1	B16	A46
T1-1	B16	A49	T2-1	B16	A49
T1-1	B16	A54	T2-1	B16	A54
T1-1	B16	A66	T2-1	B16	A66
T1-1	B16	A67	T2-1	B16	A67
T1-1	B16	A68	T2-1	B16	A68
T1-1	B16	A69	T2-1	B16	A69
T1-1	B16	A70	T2-1	B16	A70
T1-1	B16	A76	T2-1	B16	A76
T1-1	B16	A77	T2-1	B16	A77

Table 18

T1-1	B16	A78	T2-1	B16	A78
T1-1	B16	A106	T2-1	B16	A106
T1-1	B16	A110	T2-1	B16	A110
T2-2	B16	A2	T2-3	B16	A2
T2-2	B16	A5	T2-3	B16	A5
T2-2	B16	A35	T2-3	B16	A35
T2-2	B16	A37	T2-3	B16	A37
T2-2	B16	A45	T2-3	B16	A45
T2-2	B16	A46	T2-3	B16	A46
T2-2	B16	A49	T2-3	B16	A49
T2-2	B16	A54	T2-3	B16	A54
T2-2	B16	A66	T2-3	B16	A66
T2-2	B16	A67	T2-3	B16	A67
T2-2	B16	A68	T2-3	B16	A68
T2-2	B16	A69	T2-3	B16	A69
T2-2	B16	A70	T2-3	B16	A70
T2-2	B16	A76	T2-3	B16	A76
T2-2	B16	A77	T2-3	B16	A77
T2-2	B16	A78	T2-3	B16	A78
T2-2	B16	A106	T2-3	B16	A106
T2-2	B16	A110	T2-3	B16	A110
T2-4	B16	A2	T2-5	B16	A2
T2-4	B16	A5	T2-5	B16	A5
T2-4	B16	A35	T2-5	B16	A35
T2-4	B16	A37	T2-5	B16	A37
T2-4	B16	A45	T2-5	B16	A45
T2-4	B16	A46	T2-5	B16	A46
T2-4	B16	A49	T2-5	B16	A49
T2-4	B16	A54	T2-5	B16	A54
T2-4	B16	A66	T2-5	B16	A66
T2-4	B16	A67	T2-5	B16	A67
T2-4	B16	A68	T2-5	B16	A68
T2-4	B16	A69	T2-5	B16	A69
T2-4	B16	A70	T2-5	B16	A70
T2-4	B16	A76	T2-5	B16	A76
T2-4	B16	A77	T2-5	B16	A77
T2-4	B16	A78	T2-5	B16	A78
T2-4	B16	A106	T2-5	B16	A106
T2-4	B16	A110	T2-5	B16	A110
T5-1	B16	A2	T7-1	B16	A2
T5-1	B16	A5	T7-1	B16	A5
T5-1	B16	A35	T7-1	B16	A35
T5-1	B16	A37	T7-1	B16	A37

Table 19

T5-1	B16	A45	T7-1	B16	A45
T5-1	B16	A46	T7-1	B16	A46
T5-1	B16	A49	T7-1	B16	A49
T5-1	B16	A54	T7-1	B16	A54
T5-1	B16	A66	T7-1	B16	A66
T5-1	B16	A67	T7-1	B16	A67
T5-1	B16	A68	T7-1	B16	A68
T5-1	B16	A69	T7-1	B16	A69
T5-1	B16	A70	T7-1	B16	A70
T5-1	B16	A76	T7-1	B16	A76
T5-1	B16	A77	T7-1	B16	A77
T5-1	B16	A78	T7-1	B16	A78
T5-1	B16	A106	T7-1	B16	A106
T5-1	B16	A110	T7-1	B16	A110
T1-1	B17	A2	T2-1	B17	A2
T1-1	B17	A5	T2-1	B17	A5
T1-1	B17	A35	T2-1	B17	A35
T1-1	B17	A37	T2-1	B17	A37
T1-1	B17	A45	T2-1	B17	A45
T1-1	B17	A46	T2-1	B17	A46
T1-1	B17	A49	T2-1	B17	A49
T1-1	B17	A54	T2-1	B17	A54
T1-1	B17	A66	T2-1	B17	A66
T1-1	B17	A67	T2-1	B17	A67
T1-1	B17	A68	T2-1	B17	A68
T1-1	B17	A69	T2-1	B17	A69
T1-1	B17	A70	T2-1	B17	A70
T1-1	B17	A76	T2-1	B17	A76
T1-1	B17	A77	T2-1	B17	A77
T1-1	B17	A78	T2-1	B17	A78
T1-1	B17	A106	T2-1	B17	A106
T1-1	B17	A110	T2-1	B17	A110
T2-2	B17	A2	T2-3	B17	A2
T2-2	B17	A5	T2-3	B17	A5
T2-2	B17	A35	T2-3	B17	A35
T2-2	B17	A37	T2-3	B17	A37
T2-2	B17	A45	T2-3	B17	A45
T2-2	B17	A46	T2-3	B17	A46
T2-2	B17	A49	T2-3	B17	A49
T2-2	B17	A54	T2-3	B17	A54
T2-2	B17	A66	T2-3	B17	A66
T2-2	B17	A67	T2-3	B17	A67
T2-2	B17	A68	T2-3	B17	A68

Table 20

T2-2	B17	A69	T2-3	B17	A69
T2-2	B17	A70	T2-3	B17	A70
T2-2	B17	A76	T2-3	B17	A76
T2-2	B17	A77	T2-3	B17	A77
T2-2	B17	A78	T2-3	B17	A78
T2-2	B17	A106	T2-3	B17	A106
T2-2	B17	A110	T2-3	B17	A110
T2-4	B17	A2	T2-5	B17	A2
T2-4	B17	A5	T2-5	B17	A5
T2-4	B17	A35	T2-5	B17	A35
T2-4	B17	A37	T2-5	B17	A37
T2-4	B17	A45	T2-5	B17	A45
T2-4	B17	A46	T2-5	B17	A46
T2-4	B17	A49	T2-5	B17	A49
T2-4	B17	A54	T2-5	B17	A54
T2-4	B17	A66	T2-5	B17	A66
T2-4	B17	A67	T2-5	B17	A67
T2-4	B17	A68	T2-5	B17	A68
T2-4	B17	A69	T2-5	B17	A69
T2-4	B17	A70	T2-5	B17	A70
T2-4	B17	A76	T2-5	B17	A76
T2-4	B17	A77	T2-5	B17	A77
T2-4	B17	A78	T2-5	B17	A78
T2-4	B17	A106	T2-5	B17	A106
T2-4	B17	A110	T2-5	B17	A110
T5-1	B17	A2	T7-1	B17	A2
T5-1	B17	A5	T7-1	B17	A5
T5-1	B17	A35	T7-1	B17	A35
T5-1	B17	A37	T7-1	B17	A37
T5-1	B17	A45	T7-1	B17	A45
T5-1	B17	A46	T7-1	B17	A46
T5-1	B17	A49	T7-1	B17	A49
T5-1	B17	A54	T7-1	B17	A54
T5-1	B17	A66	T7-1	B17	A66
T5-1	B17	A67	T7-1	B17	A67
T5-1	B17	A68	T7-1	B17	A68
T5-1	B17	A69	T7-1	B17	A69
T5-1	B17	A70	T7-1	B17	A70
T5-1	B17	A76	T7-1	B17	A76
T5-1	B17	A77	T7-1	B17	A77
T5-1	B17	A78	T7-1	B17	A78
T5-1	B17	A106	T7-1	B17	A106
T5-1	B17	A110	T7-1	B17	A110

Table 21

T1-1	B24	A2	T2-1	B24	A2
T1-1	B24	A5	T2-1	B24	A5
T1-1	B24	A35	T2-1	B24	A35
T1-1	B24	A37	T2-1	B24	A37
T1-1	B24	A45	T2-1	B24	A45
T1-1	B24	A46	T2-1	B24	A46
T1-1	B24	A49	T2-1	B24	A49
T1-1	B24	A54	T2-1	B24	A54
T1-1	B24	A66	T2-1	B24	A66
T1-1	B24	A67	T2-1	B24	A67
T1-1	B24	A68	T2-1	B24	A68
T1-1	B24	A69	T2-1	B24	A69
T1-1	B24	A70	T2-1	B24	A70
T1-1	B24	A76	T2-1	B24	A76
T1-1	B24	A77	T2-1	B24	A77
T1-1	B24	A78	T2-1	B24	A78
T1-1	B24	A106	T2-1	B24	A106
T1-1	B24	A110	T2-1	B24	A110
T2-2	B24	A2	T2-3	B24	A2
T2-2	B24	A5	T2-3	B24	A5
T2-2	B24	A35	T2-3	B24	A35
T2-2	B24	A37	T2-3	B24	A37
T2-2	B24	A45	T2-3	B24	A45
T2-2	B24	A46	T2-3	B24	A46
T2-2	B24	A49	T2-3	B24	A49
T2-2	B24	A54	T2-3	B24	A54
T2-2	B24	A66	T2-3	B24	A66
T2-2	B24	A67	T2-3	B24	A67
T2-2	B24	A68	T2-3	B24	A68
T2-2	B24	A69	T2-3	B24	A69
T2-2	B24	A70	T2-3	B24	A70
T2-2	B24	A76	T2-3	B24	A76
T2-2	B24	A77	T2-3	B24	A77
T2-2	B24	A78	T2-3	B24	A78
T2-2	B24	A106	T2-3	B24	A106
T2-2	B24	A110	T2-3	B24	A110
T2-4	B24	A2	T2-5	B24	A2
T2-4	B24	A5	T2-5	B24	A5
T2-4	B24	A35	T2-5	B24	A35
T2-4	B24	A37	T2-5	B24	A37
T2-4	B24	A45	T2-5	B24	A45
T2-4	B24	A46	T2-5	B24	A46
T2-4	B24	A49	T2-5	B24	A49

Table 22

T2-4	B24	A54	T2-5	B24	A54
T2-4	B24	A66	T2-5	B24	A66
T2-4	B24	A67	T2-5	B24	A67
T2-4	B24	A68	T2-5	B24	A68
T2-4	B24	A69	T2-5	B24	A69
T2-4	B24	A70	T2-5	B24	A70
T2-4	B24	A76	T2-5	B24	A76
T2-4	B24	A77	T2-5	B24	A77
T2-4	B24	A78	T2-5	B24	A78
T2-4	B24	A106	T2-5	B24	A106
T2-4	B24	A110	T2-5	B24	A110
T5-1	B24	A2	T7-1	B24	A2
T5-1	B24	A5	T7-1	B24	A5
T5-1	B24	A35	T7-1	B24	A35
T5-1	B24	A37	T7-1	B24	A37
T5-1	B24	A45	T7-1	B24	A45
T5-1	B24	A46	T7-1	B24	A46
T5-1	B24	A49	T7-1	B24	A49
T5-1	B24	A54	T7-1	B24	A54
T5-1	B24	A66	T7-1	B24	A66
T5-1	B24	A67	T7-1	B24	A67
T5-1	B24	A68	T7-1	B24	A68
T5-1	B24	A69	T7-1	B24	A69
T5-1	B24	A70	T7-1	B24	A70
T5-1	B24	A76	T7-1	B24	A76
T5-1	B24	A77	T7-1	B24	A77
T5-1	B24	A78	T7-1	B24	A78
T5-1	B24	A106	T7-1	B24	A106
T5-1	B24	A110	T7-1	B24	A110
T1-1	B28	A2	T2-1	B28	A2
T1-1	B28	A5	T2-1	B28	A5
T1-1	B28	A35	T2-1	B28	A35
T1-1	B28	A37	T2-1	B28	A37
T1-1	B28	A45	T2-1	B28	A45
T1-1	B28	A46	T2-1	B28	A46
T1-1	B28	A49	T2-1	B28	A49
T1-1	B28	A54	T2-1	B28	A54
T1-1	B28	A66	T2-1	B28	A66
T1-1	B28	A67	T2-1	B28	A67
T1-1	B28	A68	T2-1	B28	A68
T1-1	B28	A69	T2-1	B28	A69
T1-1	B28	A70	T2-1	B28	A70
T1-1	B28	A76	T2-1	B28	A76

Table 23

T1-1	B28	A77	T2-1	B28	A77
T1-1	B28	A78	T2-1	B28	A78
T1-1	B28	A106	T2-1	B28	A106
T1-1	B28	A110	T2-1	B28	A110
T2-2	B28	A2	T2-3	B28	A2
T2-2	B28	A5	T2-3	B28	A5
T2-2	B28	A35	T2-3	B28	A35
T2-2	B28	A37	T2-3	B28	A37
T2-2	B28	A45	T2-3	B28	A45
T2-2	B28	A46	T2-3	B28	A46
T2-2	B28	A49	T2-3	B28	A49
T2-2	B28	A54	T2-3	B28	A54
T2-2	B28	A66	T2-3	B28	A66
T2-2	B28	A67	T2-3	B28	A67
T2-2	B28	A68	T2-3	B28	A68
T2-2	B28	A69	T2-3	B28	A69
T2-2	B28	A70	T2-3	B28	A70
T2-2	B28	A76	T2-3	B28	A76
T2-2	B28	A77	T2-3	B28	A77
T2-2	B28	A78	T2-3	B28	A78
T2-2	B28	A106	T2-3	B28	A106
T2-2	B28	A110	T2-3	B28	A110
T2-4	B28	A2	T2-5	B28	A2
T2-4	B28	A5	T2-5	B28	A5
T2-4	B28	A35	T2-5	B28	A35
T2-4	B28	A37	T2-5	B28	A37
T2-4	B28	A45	T2-5	B28	A45
T2-4	B28	A46	T2-5	B28	A46
T2-4	B28	A49	T2-5	B28	A49
T2-4	B28	A54	T2-5	B28	A54
T2-4	B28	A66	T2-5	B28	A66
T2-4	B28	A67	T2-5	B28	A67
T2-4	B28	A68	T2-5	B28	A68
T2-4	B28	A69	T2-5	B28	A69
T2-4	B28	A70	T2-5	B28	A70
T2-4	B28	A76	T2-5	B28	A76
T2-4	B28	A77	T2-5	B28	A77
T2-4	B28	A78	T2-5	B28	A78
T2-4	B28	A106	T2-5	B28	A106
T2-4	B28	A110	T2-5	B28	A110
T5-1	B28	A2	T7-1	B28	A2
T5-1	B28	A5	T7-1	B28	A5
T5-1	B28	A35	T7-1	B28	A35

Table 24

T5-1	B28	A37	T7-1	B28	A37
T5-1	B28	A45	T7-1	B28	A45
T5-1	B28	A46	T7-1	B28	A46
T5-1	B28	A49	T7-1	B28	A49
T5-1	B28	A54	T7-1	B28	A54
T5-1	B28	A66	T7-1	B28	A66
T5-1	B28	A67	T7-1	B28	A67
T5-1	B28	A68	T7-1	B28	A68
T5-1	B28	A69	T7-1	B28	A69
T5-1	B28	A70	T7-1	B28	A70
T5-1	B28	A76	T7-1	B28	A76
T5-1	B28	A77	T7-1	B28	A77
T5-1	B28	A78	T7-1	B28	A78
T5-1	B28	A106	T7-1	B28	A106
T5-1	B28	A110	T7-1	B28	A110
T1-1	B29	A2	T2-1	B29	A2
T1-1	B29	A5	T2-1	B29	A5
T1-1	B29	A35	T2-1	B29	A35
T1-1	B29	A37	T2-1	B29	A37
T1-1	B29	A45	T2-1	B29	A45
T1-1	B29	A46	T2-1	B29	A46
T1-1	B29	A49	T2-1	B29	A49
T1-1	B29	A54	T2-1	B29	A54
T1-1	B29	A66	T2-1	B29	A66
T1-1	B29	A67	T2-1	B29	A67
T1-1	B29	A68	T2-1	B29	A68
T1-1	B29	A69	T2-1	B29	A69
T1-1	B29	A70	T2-1	B29	A70
T1-1	B29	A76	T2-1	B29	A76
T1-1	B29	A77	T2-1	B29	A77
T1-1	B29	A78	T2-1	B29	A78
T1-1	B29	A106	T2-1	B29	A106
T1-1	B29	A110	T2-1	B29	A110
T2-2	B29	A2	T2-3	B29	A2
T2-2	B29	A5	T2-3	B29	A5
T2-2	B29	A35	T2-3	B29	A35
T2-2	B29	A37	T2-3	B29	A37
T2-2	B29	A45	T2-3	B29	A45
T2-2	B29	A46	T2-3	B29	A46
T2-2	B29	A49	T2-3	B29	A49
T2-2	B29	A54	T2-3	B29	A54
T2-2	B29	A66	T2-3	B29	A66
T2-2	B29	A67	T2-3	B29	A67

Table 25

T2-2	B29	A68	T2-3	B29	A68
T2-2	B29	A69	T2-3	B29	A69
T2-2	B29	A70	T2-3	B29	A70
T2-2	B29	A76	T2-3	B29	A76
T2-2	B29	A77	T2-3	B29	A77
T2-2	B29	A78	T2-3	B29	A78
T2-2	B29	A106	T2-3	B29	A106
T2-2	B29	A110	T2-3	B29	A110
T2-4	B29	A2	T2-5	B29	A2
T2-4	B29	A5	T2-5	B29	A5
T2-4	B29	A35	T2-5	B29	A35
T2-4	B29	A37	T2-5	B29	A37
T2-4	B29	A45	T2-5	B29	A45
T2-4	B29	A46	T2-5	B29	A46
T2-4	B29	A49	T2-5	B29	A49
T2-4	B29	A54	T2-5	B29	A54
T2-4	B29	A66	T2-5	B29	A66
T2-4	B29	A67	T2-5	B29	A67
T2-4	B29	A68	T2-5	B29	A68
T2-4	B29	A69	T2-5	B29	A69
T2-4	B29	A70	T2-5	B29	A70
T2-4	B29	A76	T2-5	B29	A76
T2-4	B29	A77	T2-5	B29	A77
T2-4	B29	A78	T2-5	B29	A78
T2-4	B29	A106	T2-5	B29	A106
T2-4	B29	A110	T2-5	B29	A110
T5-1	B29	A2	T7-1	B29	A2
T5-1	B29	A5	T7-1	B29	A5
T5-1	B29	A35	T7-1	B29	A35
T5-1	B29	A37	T7-1	B29	A37
T5-1	B29	A45	T7-1	B29	A45
T5-1	B29	A46	T7-1	B29	A46
T5-1	B29	A49	T7-1	B29	A49
T5-1	B29	A54	T7-1	B29	A54
T5-1	B29	A66	T7-1	B29	A66
T5-1	B29	A67	T7-1	B29	A67
T5-1	B29	A68	T7-1	B29	A68
T5-1	B29	A69	T7-1	B29	A69
T5-1	B29	A70	T7-1	B29	A70
T5-1	B29	A76	T7-1	B29	A76
T5-1	B29	A77	T7-1	B29	A77
T5-1	B29	A78	T7-1	B29	A78
T5-1	B29	A106	T7-1	B29	A106

Table 26

T5-1	B29	A110	T7-1	B29	A110
T1-1	B30	A2	T2-1	B30	A2
T1-1	B30	A5	T2-1	B30	A5
T1-1	B30	A35	T2-1	B30	A35
T1-1	B30	A37	T2-1	B30	A37
T1-1	B30	A45	T2-1	B30	A45
T1-1	B30	A46	T2-1	B30	A46
T1-1	B30	A49	T2-1	B30	A49
T1-1	B30	A54	T2-1	B30	A54
T1-1	B30	A66	T2-1	B30	A66
T1-1	B30	A67	T2-1	B30	A67
T1-1	B30	A68	T2-1	B30	A68
T1-1	B30	A69	T2-1	B30	A69
T1-1	B30	A70	T2-1	B30	A70
T1-1	B30	A76	T2-1	B30	A76
T1-1	B30	A77	T2-1	B30	A77
T1-1	B30	A78	T2-1	B30	A78
T1-1	B30	A106	T2-1	B30	A106
T1-1	B30	A110	T2-1	B30	A110
T2-2	B30	A2	T2-3	B30	A2
T2-2	B30	A5	T2-3	B30	A5
T2-2	B30	A35	T2-3	B30	A35
T2-2	B30	A37	T2-3	B30	A37
T2-2	B30	A45	T2-3	B30	A45
T2-2	B30	A46	T2-3	B30	A46
T2-2	B30	A49	T2-3	B30	A49
T2-2	B30	A54	T2-3	B30	A54
T2-2	B30	A66	T2-3	B30	A66
T2-2	B30	A67	T2-3	B30	A67
T2-2	B30	A68	T2-3	B30	A68
T2-2	B30	A69	T2-3	B30	A69
T2-2	B30	A70	T2-3	B30	A70
T2-2	B30	A76	T2-3	B30	A76
T2-2	B30	A77	T2-3	B30	A77
T2-2	B30	A78	T2-3	B30	A78
T2-2	B30	A106	T2-3	B30	A106
T2-2	B30	A110	T2-3	B30	A110
T2-4	B30	A2	T2-5	B30	A2
T2-4	B30	A5	T2-5	B30	A5
T2-4	B30	A35	T2-5	B30	A35
T2-4	B30	A37	T2-5	B30	A37
T2-4	B30	A45	T2-5	B30	A45
T2-4	B30	A46	T2-5	B30	A46

Table 27

T2-4	B30	A49	T2-5	B30	A49
T2-4	B30	A54	T2-5	B30	A54
T2-4	B30	A66	T2-5	B30	A66
T2-4	B30	A67	T2-5	B30	A67
T2-4	B30	A68	T2-5	B30	A68
T2-4	B30	A69	T2-5	B30	A69
T2-4	B30	A70	T2-5	B30	A70
T2-4	B30	A76	T2-5	B30	A76
T2-4	B30	A77	T2-5	B30	A77
T2-4	B30	A78	T2-5	B30	A78
T2-4	B30	A106	T2-5	B30	A106
T2-4	B30	A110	T2-5	B30	A110
T5-1	B30	A2	T7-1	B30	A2
T5-1	B30	A5	T7-1	B30	A5
T5-1	B30	A35	T7-1	B30	A35
T5-1	B30	A37	T7-1	B30	A37
T5-1	B30	A45	T7-1	B30	A45
T5-1	B30	A46	T7-1	B30	A46
T5-1	B30	A49	T7-1	B30	A49
T5-1	B30	A54	T7-1	B30	A54
T5-1	B30	A66	T7-1	B30	A66
T5-1	B30	A67	T7-1	B30	A67
T5-1	B30	A68	T7-1	B30	A68
T5-1	B30	A69	T7-1	B30	A69
T5-1	B30	A70	T7-1	B30	A70
T5-1	B30	A76	T7-1	B30	A76
T5-1	B30	A77	T7-1	B30	A77
T5-1	B30	A78	T7-1	B30	A78
T5-1	B30	A106	T7-1	B30	A106
T5-1	B30	A110	T7-1	B30	A110
T1-1	B31	A2	T2-1	B31	A2
T1-1	B31	A5	T2-1	B31	A5
T1-1	B31	A35	T2-1	B31	A35
T1-1	B31	A37	T2-1	B31	A37
T1-1	B31	A45	T2-1	B31	A45
T1-1	B31	A46	T2-1	B31	A46
T1-1	B31	A49	T2-1	B31	A49
T1-1	B31	A54	T2-1	B31	A54
T1-1	B31	A66	T2-1	B31	A66
T1-1	B31	A67	T2-1	B31	A67
T1-1	B31	A68	T2-1	B31	A68
T1-1	B31	A69	T2-1	B31	A69
T1-1	B31	A70	T2-1	B31	A70

Table 28

T1-1	B31	A76	T2-1	B31	A76
T1-1	B31	A77	T2-1	B31	A77
T1-1	B31	A78	T2-1	B31	A78
T1-1	B31	A106	T2-1	B31	A106
T1-1	B31	A110	T2-1	B31	A110
T2-2	B31	A2	T2-3	B31	A2
T2-2	B31	A5	T2-3	B31	A5
T2-2	B31	A35	T2-3	B31	A35
T2-2	B31	A37	T2-3	B31	A37
T2-2	B31	A45	T2-3	B31	A45
T2-2	B31	A46	T2-3	B31	A46
T2-2	B31	A49	T2-3	B31	A49
T2-2	B31	A54	T2-3	B31	A54
T2-2	B31	A66	T2-3	B31	A66
T2-2	B31	A67	T2-3	B31	A67
T2-2	B31	A68	T2-3	B31	A68
T2-2	B31	A69	T2-3	B31	A69
T2-2	B31	A70	T2-3	B31	A70
T2-2	B31	A76	T2-3	B31	A76
T2-2	B31	A77	T2-3	B31	A77
T2-2	B31	A78	T2-3	B31	A78
T2-2	B31	A106	T2-3	B31	A106
T2-2	B31	A110	T2-3	B31	A110
T2-4	B31	A2	T2-5	B31	A2
T2-4	B31	A5	T2-5	B31	A5
T2-4	B31	A35	T2-5	B31	A35
T2-4	B31	A37	T2-5	B31	A37
T2-4	B31	A45	T2-5	B31	A45
T2-4	B31	A46	T2-5	B31	A46
T2-4	B31	A49	T2-5	B31	A49
T2-4	B31	A54	T2-5	B31	A54
T2-4	B31	A66	T2-5	B31	A66
T2-4	B31	A67	T2-5	B31	A67
T2-4	B31	A68	T2-5	B31	A68
T2-4	B31	A69	T2-5	B31	A69
T2-4	B31	A70	T2-5	B31	A70
T2-4	B31	A76	T2-5	B31	A76
T2-4	B31	A77	T2-5	B31	A77
T2-4	B31	A78	T2-5	B31	A78
T2-4	B31	A106	T2-5	B31	A106
T2-4	B31	A110	T2-5	B31	A110
T5-1	B31	A2	T7-1	B31	A2
T5-1	B31	A5	T7-1	B31	A5

Table 29

T5-1	B31	A35	T7-1	B31	A35
T5-1	B31	A37	T7-1	B31	A37
T5-1	B31	A45	T7-1	B31	A45
T5-1	B31	A46	T7-1	B31	A46
T5-1	B31	A49	T7-1	B31	A49
T5-1	B31	A54	T7-1	B31	A54
T5-1	B31	A66	T7-1	B31	A66
T5-1	B31	A67	T7-1	B31	A67
T5-1	B31	A68	T7-1	B31	A68
T5-1	B31	A69	T7-1	B31	A69
T5-1	B31	A70	T7-1	B31	A70
T5-1	B31	A76	T7-1	B31	A76
T5-1	B31	A77	T7-1	B31	A77
T5-1	B31	A78	T7-1	B31	A78
T5-1	B31	A106	T7-1	B31	A106
T5-1	B31	A110	T7-1	B31	A110
T1-1	B32	A2	T2-1	B32	A2
T1-1	B32	A5	T2-1	B32	A5
T1-1	B32	A35	T2-1	B32	A35
T1-1	B32	A37	T2-1	B32	A37
T1-1	B32	A45	T2-1	B32	A45
T1-1	B32	A46	T2-1	B32	A46
T1-1	B32	A49	T2-1	B32	A49
T1-1	B32	A54	T2-1	B32	A54
T1-1	B32	A66	T2-1	B32	A66
T1-1	B32	A67	T2-1	B32	A67
T1-1	B32	A68	T2-1	B32	A68
T1-1	B32	A69	T2-1	B32	A69
T1-1	B32	A70	T2-1	B32	A70
T1-1	B32	A76	T2-1	B32	A76
T1-1	B32	A77	T2-1	B32	A77
T1-1	B32	A78	T2-1	B32	A78
T1-1	B32	A106	T2-1	B32	A106
T1-1	B32	A110	T2-1	B32	A110
T2-2	B32	A2	T2-3	B32	A2
T2-2	B32	A5	T2-3	B32	A5
T2-2	B32	A35	T2-3	B32	A35
T2-2	B32	A37	T2-3	B32	A37
T2-2	B32	A45	T2-3	B32	A45
T2-2	B32	A46	T2-3	B32	A46
T2-2	B32	A49	T2-3	B32	A49
T2-2	B32	A54	T2-3	B32	A54
T2-2	B32	A66	T2-3	B32	A66

Table 30

T2-2	B32	A67	T2-3	B32	A67
T2-2	B32	A68	T2-3	B32	A68
T2-2	B32	A69	T2-3	B32	A69
T2-2	B32	A70	T2-3	B32	A70
T2-2	B32	A76	T2-3	B32	A76
T2-2	B32	A77	T2-3	B32	A77
T2-2	B32	A78	T2-3	B32	A78
T2-2	B32	A106	T2-3	B32	A106
T2-2	B32	A110	T2-3	B32	A110
T2-4	B32	A2	T2-5	B32	A2
T2-4	B32	A5	T2-5	B32	A5
T2-4	B32	A35	T2-5	B32	A35
T2-4	B32	A37	T2-5	B32	A37
T2-4	B32	A45	T2-5	B32	A45
T2-4	B32	A46	T2-5	B32	A46
T2-4	B32	A49	T2-5	B32	A49
T2-4	B32	A54	T2-5	B32	A54
T2-4	B32	A66	T2-5	B32	A66
T2-4	B32	A67	T2-5	B32	A67
T2-4	B32	A68	T2-5	B32	A68
T2-4	B32	A69	T2-5	B32	A69
T2-4	B32	A70	T2-5	B32	A70
T2-4	B32	A76	T2-5	B32	A76
T2-4	B32	A77	T2-5	B32	A77
T2-4	B32	A78	T2-5	B32	A78
T2-4	B32	A106	T2-5	B32	A106
T2-4	B32	A110	T2-5	B32	A110
T5-1	B32	A2	T7-1	B32	A2
T5-1	B32	A5	T7-1	B32	A5
T5-1	B32	A35	T7-1	B32	A35
T5-1	B32	A37	T7-1	B32	A37
T5-1	B32	A45	T7-1	B32	A45
T5-1	B32	A46	T7-1	B32	A46
T5-1	B32	A49	T7-1	B32	A49
T5-1	B32	A54	T7-1	B32	A54
T5-1	B32	A66	T7-1	B32	A66
T5-1	B32	A67	T7-1	B32	A67
T5-1	B32	A68	T7-1	B32	A68
T5-1	B32	A69	T7-1	B32	A69
T5-1	B32	A70	T7-1	B32	A70
T5-1	B32	A76	T7-1	B32	A76
T5-1	B32	A77	T7-1	B32	A77
T5-1	B32	A78	T7-1	B32	A78

Table 31

T5-1	B32	A106	T7-1	B32	A106
T5-1	B32	A110	T7-1	B32	A110
T1-1	B33	A2	T2-1	B33	A2
T1-1	B33	A5	T2-1	B33	A5
T1-1	B33	A35	T2-1	B33	A35
T1-1	B33	A37	T2-1	B33	A37
T1-1	B33	A45	T2-1	B33	A45
T1-1	B33	A46	T2-1	B33	A46
T1-1	B33	A49	T2-1	B33	A49
T1-1	B33	A54	T2-1	B33	A54
T1-1	B33	A66	T2-1	B33	A66
T1-1	B33	A67	T2-1	B33	A67
T1-1	B33	A68	T2-1	B33	A68
T1-1	B33	A69	T2-1	B33	A69
T1-1	B33	A70	T2-1	B33	A70
T1-1	B33	A76	T2-1	B33	A76
T1-1	B33	A77	T2-1	B33	A77
T1-1	B33	A78	T2-1	B33	A78
T1-1	B33	A106	T2-1	B33	A106
T1-1	B33	A110	T2-1	B33	A110
T2-2	B33	A2	T2-3	B33	A2
T2-2	B33	A5	T2-3	B33	A5
T2-2	B33	A35	T2-3	B33	A35
T2-2	B33	A37	T2-3	B33	A37
T2-2	B33	A45	T2-3	B33	A45
T2-2	B33	A46	T2-3	B33	A46
T2-2	B33	A49	T2-3	B33	A49
T2-2	B33	A54	T2-3	B33	A54
T2-2	B33	A66	T2-3	B33	A66
T2-2	B33	A67	T2-3	B33	A67
T2-2	B33	A68	T2-3	B33	A68
T2-2	B33	A69	T2-3	B33	A69
T2-2	B33	A70	T2-3	B33	A70
T2-2	B33	A76	T2-3	B33	A76
T2-2	B33	A77	T2-3	B33	A77
T2-2	B33	A78	T2-3	B33	A78
T2-2	B33	A106	T2-3	B33	A106
T2-2	B33	A110	T2-3	B33	A110
T2-4	B33	A2	T2-5	B33	A2
T2-4	B33	A5	T2-5	B33	A5
T2-4	B33	A35	T2-5	B33	A35
T2-4	B33	A37	T2-5	B33	A37
T2-4	B33	A45	T2-5	B33	A45

Table 32

T2-4	B33	A46	T2-5	B33	A46
T2-4	B33	A49	T2-5	B33	A49
T2-4	B33	A54	T2-5	B33	A54
T2-4	B33	A66	T2-5	B33	A66
T2-4	B33	A67	T2-5	B33	A67
T2-4	B33	A68	T2-5	B33	A68
T2-4	B33	A69	T2-5	B33	A69
T2-4	B33	A70	T2-5	B33	A70
T2-4	B33	A76	T2-5	B33	A76
T2-4	B33	A77	T2-5	B33	A77
T2-4	B33	A78	T2-5	B33	A78
T2-4	B33	A106	T2-5	B33	A106
T2-4	B33	A110	T2-5	B33	A110
T5-1	B33	A2	T7-1	B33	A2
T5-1	B33	A5	T7-1	B33	A5
T5-1	B33	A35	T7-1	B33	A35
T5-1	B33	A37	T7-1	B33	A37
T5-1	B33	A45	T7-1	B33	A45
T5-1	B33	A46	T7-1	B33	A46
T5-1	B33	A49	T7-1	B33	A49
T5-1	B33	A54	T7-1	B33	A54
T5-1	B33	A66	T7-1	B33	A66
T5-1	B33	A67	T7-1	B33	A67
T5-1	B33	A68	T7-1	B33	A68
T5-1	B33	A69	T7-1	B33	A69
T5-1	B33	A70	T7-1	B33	A70
T5-1	B33	A76	T7-1	B33	A76
T5-1	B33	A77	T7-1	B33	A77
T5-1	B33	A78	T7-1	B33	A78
T5-1	B33	A106	T7-1	B33	A106
T5-1	B33	A110	T7-1	B33	A110
T1-1	B34	A2	T2-1	B34	A2
T1-1	B34	A5	T2-1	B34	A5
T1-1	B34	A35	T2-1	B34	A35
T1-1	B34	A37	T2-1	B34	A37
T1-1	B34	A45	T2-1	B34	A45
T1-1	B34	A46	T2-1	B34	A46
T1-1	B34	A49	T2-1	B34	A49
T1-1	B34	A54	T2-1	B34	A54
T1-1	B34	A66	T2-1	B34	A66
T1-1	B34	A67	T2-1	B34	A67
T1-1	B34	A68	T2-1	B34	A68
T1-1	B34	A69	T2-1	B34	A69

Table 33

T1-1	B34	A70	T2-1	B34	A70
T1-1	B34	A76	T2-1	B34	A76
T1-1	B34	A77	T2-1	B34	A77
T1-1	B34	A78	T2-1	B34	A78
T1-1	B34	A106	T2-1	B34	A106
T1-1	B34	A110	T2-1	B34	A110
T2-2	B34	A2	T2-3	B34	A2
T2-2	B34	A5	T2-3	B34	A5
T2-2	B34	A35	T2-3	B34	A35
T2-2	B34	A37	T2-3	B34	A37
T2-2	B34	A45	T2-3	B34	A45
T2-2	B34	A46	T2-3	B34	A46
T2-2	B34	A49	T2-3	B34	A49
T2-2	B34	A54	T2-3	B34	A54
T2-2	B34	A66	T2-3	B34	A66
T2-2	B34	A67	T2-3	B34	A67
T2-2	B34	A68	T2-3	B34	A68
T2-2	B34	A69	T2-3	B34	A69
T2-2	B34	A70	T2-3	B34	A70
T2-2	B34	A76	T2-3	B34	A76
T2-2	B34	A77	T2-3	B34	A77
T2-2	B34	A78	T2-3	B34	A78
T2-2	B34	A106	T2-3	B34	A106
T2-2	B34	A110	T2-3	B34	A110
T2-4	B34	A2	T2-5	B34	A2
T2-4	B34	A5	T2-5	B34	A5
T2-4	B34	A35	T2-5	B34	A35
T2-4	B34	A37	T2-5	B34	A37
T2-4	B34	A45	T2-5	B34	A45
T2-4	B34	A46	T2-5	B34	A46
T2-4	B34	A49	T2-5	B34	A49
T2-4	B34	A54	T2-5	B34	A54
T2-4	B34	A66	T2-5	B34	A66
T2-4	B34	A67	T2-5	B34	A67
T2-4	B34	A68	T2-5	B34	A68
T2-4	B34	A69	T2-5	B34	A69
T2-4	B34	A70	T2-5	B34	A70
T2-4	B34	A76	T2-5	B34	A76
T2-4	B34	A77	T2-5	B34	A77
T2-4	B34	A78	T2-5	B34	A78
T2-4	B34	A106	T2-5	B34	A106
T2-4	B34	A110	T2-5	B34	A110

Table 34

T5-1	B34	A2	T7-1	B34	A2
T5-1	B34	A5	T7-1	B34	A5
T5-1	B34	A35	T7-1	B34	A35
T5-1	B34	A37	T7-1	B34	A37
T5-1	B34	A45	T7-1	B34	A45
T5-1	B34	A46	T7-1	B34	A46
T5-1	B34	A49	T7-1	B34	A49
T5-1	B34	A54	T7-1	B34	A54
T5-1	B34	A66	T7-1	B34	A66
T5-1	B34	A67	T7-1	B34	A67
T5-1	B34	A68	T7-1	B34	A68
T5-1	B34	A69	T7-1	B34	A69
T5-1	B34	A70	T7-1	B34	A70
T5-1	B34	A76	T7-1	B34	A76
T5-1	B34	A77	T7-1	B34	A77
T5-1	B34	A78	T7-1	B34	A78
T5-1	B34	A106	T7-1	B34	A106
T5-1	B34	A110	T7-1	B34	A110
T1-1	B35	A2	T2-1	B35	A2
T1-1	B35	A5	T2-1	B35	A5
T1-1	B35	A35	T2-1	B35	A35
T1-1	B35	A37	T2-1	B35	A37
T1-1	B35	A45	T2-1	B35	A45
T1-1	B35	A46	T2-1	B35	A46
T1-1	B35	A49	T2-1	B35	A49
T1-1	B35	A54	T2-1	B35	A54
T1-1	B35	A66	T2-1	B35	A66
T1-1	B35	A67	T2-1	B35	A67
T1-1	B35	A68	T2-1	B35	A68
T1-1	B35	A69	T2-1	B35	A69
T1-1	B35	A70	T2-1	B35	A70
T1-1	B35	A76	T2-1	B35	A76
T1-1	B35	A77	T2-1	B35	A77
T1-1	B35	A78	T2-1	B35	A78
T1-1	B35	A106	T2-1	B35	A106
T1-1	B35	A110	T2-1	B35	A110
T2-2	B35	A2	T2-3	B35	A2
T2-2	B35	A5	T2-3	B35	A5
T2-2	B35	A35	T2-3	B35	A35
T2-2	B35	A37	T2-3	B35	A37
T2-2	B35	A45	T2-3	B35	A45
T2-2	B35	A46	T2-3	B35	A46
T2-2	B35	A49	T2-3	B35	A49

Table 35

T2-2	B35	A54	T2-3	B35	A54
T2-2	B35	A66	T2-3	B35	A66
T2-2	B35	A67	T2-3	B35	A67
T2-2	B35	A68	T2-3	B35	A68
T2-2	B35	A69	T2-3	B35	A69
T2-2	B35	A70	T2-3	B35	A70
T2-2	B35	A76	T2-3	B35	A76
T2-2	B35	A77	T2-3	B35	A77
T2-2	B35	A78	T2-3	B35	A78
T2-2	B35	A106	T2-3	B35	A106
T2-2	B35	A110	T2-3	B35	A110
T2-4	B35	A2	T2-5	B35	A2
T2-4	B35	A5	T2-5	B35	A5
T2-4	B35	A35	T2-5	B35	A35
T2-4	B35	A37	T2-5	B35	A37
T2-4	B35	A45	T2-5	B35	A45
T2-4	B35	A46	T2-5	B35	A46
T2-4	B35	A49	T2-5	B35	A49
T2-4	B35	A54	T2-5	B35	A54
T2-4	B35	A66	T2-5	B35	A66
T2-4	B35	A67	T2-5	B35	A67
T2-4	B35	A68	T2-5	B35	A68
T2-4	B35	A69	T2-5	B35	A69
T2-4	B35	A70	T2-5	B35	A70
T2-4	B35	A76	T2-5	B35	A76
T2-4	B35	A77	T2-5	B35	A77
T2-4	B35	A78	T2-5	B35	A78
T2-4	B35	A106	T2-5	B35	A106
T2-4	B35	A110	T2-5	B35	A110
T5-1	B35	A2	T7-1	B35	A2
T5-1	B35	A5	T7-1	B35	A5
T5-1	B35	A35	T7-1	B35	A35
T5-1	B35	A37	T7-1	B35	A37
T5-1	B35	A45	T7-1	B35	A45
T5-1	B35	A46	T7-1	B35	A46
T5-1	B35	A49	T7-1	B35	A49
T5-1	B35	A54	T7-1	B35	A54
T5-1	B35	A66	T7-1	B35	A66
T5-1	B35	A67	T7-1	B35	A67
T5-1	B35	A68	T7-1	B35	A68
T5-1	B35	A69	T7-1	B35	A69
T5-1	B35	A70	T7-1	B35	A70
T5-1	B35	A76	T7-1	B35	A76

Table 36

T5-1	B35	A77	T7-1	B35	A77
T5-1	B35	A78	T7-1	B35	A78
T5-1	B35	A106	T7-1	B35	A106
T5-1	B35	A110	T7-1	B35	A110
T1-1	B36	A2	T2-1	B36	A2
T1-1	B36	A5	T2-1	B36	A5
T1-1	B36	A35	T2-1	B36	A35
T1-1	B36	A37	T2-1	B36	A37
T1-1	B36	A45	T2-1	B36	A45
T1-1	B36	A46	T2-1	B36	A46
T1-1	B36	A49	T2-1	B36	A49
T1-1	B36	A54	T2-1	B36	A54
T1-1	B36	A66	T2-1	B36	A66
T1-1	B36	A67	T2-1	B36	A67
T1-1	B36	A68	T2-1	B36	A68
T1-1	B36	A69	T2-1	B36	A69
T1-1	B36	A70	T2-1	B36	A70
T1-1	B36	A76	T2-1	B36	A76
T1-1	B36	A77	T2-1	B36	A77
T1-1	B36	A78	T2-1	B36	A78
T1-1	B36	A106	T2-1	B36	A106
T1-1	B36	A110	T2-1	B36	A110
T2-2	B36	A2	T2-3	B36	A2
T2-2	B36	A5	T2-3	B36	A5
T2-2	B36	A35	T2-3	B36	A35
T2-2	B36	A37	T2-3	B36	A37
T2-2	B36	A45	T2-3	B36	A45
T2-2	B36	A46	T2-3	B36	A46
T2-2	B36	A49	T2-3	B36	A49
T2-2	B36	A54	T2-3	B36	A54
T2-2	B36	A66	T2-3	B36	A66
T2-2	B36	A67	T2-3	B36	A67
T2-2	B36	A68	T2-3	B36	A68
T2-2	B36	A69	T2-3	B36	A69
T2-2	B36	A70	T2-3	B36	A70
T2-2	B36	A76	T2-3	B36	A76
T2-2	B36	A77	T2-3	B36	A77
T2-2	B36	A78	T2-3	B36	A78
T2-2	B36	A106	T2-3	B36	A106
T2-2	B36	A110	T2-3	B36	A110
T2-4	B36	A2	T2-5	B36	A2
T2-4	B36	A5	T2-5	B36	A5
T2-4	B36	A35	T2-5	B36	A35

Table 37

T2-4	B36	A37	T2-5	B36	A37
T2-4	B36	A45	T2-5	B36	A45
T2-4	B36	A46	T2-5	B36	A46
T2-4	B36	A49	T2-5	B36	A49
T2-4	B36	A54	T2-5	B36	A54
T2-4	B36	A66	T2-5	B36	A66
T2-4	B36	A67	T2-5	B36	A67
T2-4	B36	A68	T2-5	B36	A68
T2-4	B36	A69	T2-5	B36	A69
T2-4	B36	A70	T2-5	B36	A70
T2-4	B36	A76	T2-5	B36	A76
T2-4	B36	A77	T2-5	B36	A77
T2-4	B36	A78	T2-5	B36	A78
T2-4	B36	A106	T2-5	B36	A106
T2-4	B36	A110	T2-5	B36	A110
T5-1	B36	A2	T7-1	B36	A2
T5-1	B36	A5	T7-1	B36	A5
T5-1	B36	A35	T7-1	B36	A35
T5-1	B36	A37	T7-1	B36	A37
T5-1	B36	A45	T7-1	B36	A45
T5-1	B36	A46	T7-1	B36	A46
T5-1	B36	A49	T7-1	B36	A49
T5-1	B36	A54	T7-1	B36	A54
T5-1	B36	A66	T7-1	B36	A66
T5-1	B36	A67	T7-1	B36	A67
T5-1	B36	A68	T7-1	B36	A68
T5-1	B36	A69	T7-1	B36	A69
T5-1	B36	A70	T7-1	B36	A70
T5-1	B36	A76	T7-1	B36	A76
T5-1	B36	A77	T7-1	B36	A77
T5-1	B36	A78	T7-1	B36	A78
T5-1	B36	A106	T7-1	B36	A106
T5-1	B36	A110	T7-1	B36	A110
T1-1	B37	A2	T2-1	B37	A2
T1-1	B37	A5	T2-1	B37	A5
T1-1	B37	A35	T2-1	B37	A35
T1-1	B37	A37	T2-1	B37	A37
T1-1	B37	A45	T2-1	B37	A45
T1-1	B37	A46	T2-1	B37	A46
T1-1	B37	A49	T2-1	B37	A49
T1-1	B37	A54	T2-1	B37	A54
T1-1	B37	A66	T2-1	B37	A66
T1-1	B37	A67	T2-1	B37	A67

Table 38

T1-1	B37	A68	T2-1	B37	A68
T1-1	B37	A69	T2-1	B37	A69
T1-1	B37	A70	T2-1	B37	A70
T1-1	B37	A76	T2-1	B37	A76
T1-1	B37	A77	T2-1	B37	A77
T1-1	B37	A78	T2-1	B37	A78
T1-1	B37	A106	T2-1	B37	A106
T1-1	B37	A110	T2-1	B37	A110
T2-2	B37	A2	T2-3	B37	A2
T2-2	B37	A5	T2-3	B37	A5
T2-2	B37	A35	T2-3	B37	A35
T2-2	B37	A37	T2-3	B37	A37
T2-2	B37	A45	T2-3	B37	A45
T2-2	B37	A46	T2-3	B37	A46
T2-2	B37	A49	T2-3	B37	A49
T2-2	B37	A54	T2-3	B37	A54
T2-2	B37	A66	T2-3	B37	A66
T2-2	B37	A67	T2-3	B37	A67
T2-2	B37	A68	T2-3	B37	A68
T2-2	B37	A69	T2-3	B37	A69
T2-2	B37	A70	T2-3	B37	A70
T2-2	B37	A76	T2-3	B37	A76
T2-2	B37	A77	T2-3	B37	A77
T2-2	B37	A78	T2-3	B37	A78
T2-2	B37	A106	T2-3	B37	A106
T2-2	B37	A110	T2-3	B37	A110
T2-4	B37	A2	T2-5	B37	A2
T2-4	B37	A5	T2-5	B37	A5
T2-4	B37	A35	T2-5	B37	A35
T2-4	B37	A37	T2-5	B37	A37
T2-4	B37	A45	T2-5	B37	A45
T2-4	B37	A46	T2-5	B37	A46
T2-4	B37	A49	T2-5	B37	A49
T2-4	B37	A54	T2-5	B37	A54
T2-4	B37	A66	T2-5	B37	A66
T2-4	B37	A67	T2-5	B37	A67
T2-4	B37	A68	T2-5	B37	A68
T2-4	B37	A69	T2-5	B37	A69
T2-4	B37	A70	T2-5	B37	A70
T2-4	B37	A76	T2-5	B37	A76
T2-4	B37	A77	T2-5	B37	A77
T2-4	B37	A78	T2-5	B37	A78
T2-4	B37	A106	T2-5	B37	A106

Table 39

T2-4	B37	A110	T2-5	B37	A110
T5-1	B37	A2	T7-1	B37	A2
T5-1	B37	A5	T7-1	B37	A5
T5-1	B37	A35	T7-1	B37	A35
T5-1	B37	A37	T7-1	B37	A37
T5-1	B37	A45	T7-1	B37	A45
T5-1	B37	A46	T7-1	B37	A46
T5-1	B37	A49	T7-1	B37	A49
T5-1	B37	A54	T7-1	B37	A54
T5-1	B37	A66	T7-1	B37	A66
T5-1	B37	A67	T7-1	B37	A67
T5-1	B37	A68	T7-1	B37	A68
T5-1	B37	A69	T7-1	B37	A69
T5-1	B37	A70	T7-1	B37	A70
T5-1	B37	A76	T7-1	B37	A76
T5-1	B37	A77	T7-1	B37	A77
T5-1	B37	A78	T7-1	B37	A78
T5-1	B37	A106	T7-1	B37	A106
T5-1	B37	A110	T7-1	B37	A110
T1-1	B38	A2	T2-1	B38	A2
T1-1	B38	A5	T2-1	B38	A5
T1-1	B38	A35	T2-1	B38	A35
T1-1	B38	A37	T2-1	B38	A37
T1-1	B38	A45	T2-1	B38	A45
T1-1	B38	A46	T2-1	B38	A46
T1-1	B38	A49	T2-1	B38	A49
T1-1	B38	A54	T2-1	B38	A54
T1-1	B38	A66	T2-1	B38	A66
T1-1	B38	A67	T2-1	B38	A67
T1-1	B38	A68	T2-1	B38	A68
T1-1	B38	A69	T2-1	B38	A69
T1-1	B38	A70	T2-1	B38	A70
T1-1	B38	A76	T2-1	B38	A76
T1-1	B38	A77	T2-1	B38	A77
T1-1	B38	A78	T2-1	B38	A78
T1-1	B38	A106	T2-1	B38	A106
T1-1	B38	A110	T2-1	B38	A110
T2-2	B38	A2	T2-3	B38	A2
T2-2	B38	A5	T2-3	B38	A5
T2-2	B38	A35	T2-3	B38	A35
T2-2	B38	A37	T2-3	B38	A37
T2-2	B38	A45	T2-3	B38	A45
T2-2	B38	A46	T2-3	B38	A46

Table 40

T2-2	B38	A49	T2-3	B38	A49
T2-2	B38	A54	T2-3	B38	A54
T2-2	B38	A66	T2-3	B38	A66
T2-2	B38	A67	T2-3	B38	A67
T2-2	B38	A68	T2-3	B38	A68
T2-2	B38	A69	T2-3	B38	A69
T2-2	B38	A70	T2-3	B38	A70
T2-2	B38	A76	T2-3	B38	A76
T2-2	B38	A77	T2-3	B38	A77
T2-2	B38	A78	T2-3	B38	A78
T2-2	B38	A106	T2-3	B38	A106
T2-2	B38	A110	T2-3	B38	A110
T2-4	B38	A2	T2-5	B38	A2
T2-4	B38	A5	T2-5	B38	A5
T2-4	B38	A35	T2-5	B38	A35
T2-4	B38	A37	T2-5	B38	A37
T2-4	B38	A45	T2-5	B38	A45
T2-4	B38	A46	T2-5	B38	A46
T2-4	B38	A49	T2-5	B38	A49
T2-4	B38	A54	T2-5	B38	A54
T2-4	B38	A66	T2-5	B38	A66
T2-4	B38	A67	T2-5	B38	A67
T2-4	B38	A68	T2-5	B38	A68
T2-4	B38	A69	T2-5	B38	A69
T2-4	B38	A70	T2-5	B38	A70
T2-4	B38	A76	T2-5	B38	A76
T2-4	B38	A77	T2-5	B38	A77
T2-4	B38	A78	T2-5	B38	A78
T2-4	B38	A106	T2-5	B38	A106
T2-4	B38	A110	T2-5	B38	A110
T5-1	B38	A2	T7-1	B38	A2
T5-1	B38	A5	T7-1	B38	A5
T5-1	B38	A35	T7-1	B38	A35
T5-1	B38	A37	T7-1	B38	A37
T5-1	B38	A45	T7-1	B38	A45
T5-1	B38	A46	T7-1	B38	A46
T5-1	B38	A49	T7-1	B38	A49
T5-1	B38	A54	T7-1	B38	A54
T5-1	B38	A66	T7-1	B38	A66
T5-1	B38	A67	T7-1	B38	A67
T5-1	B38	A68	T7-1	B38	A68
T5-1	B38	A69	T7-1	B38	A69
T5-1	B38	A70	T7-1	B38	A70

Table 41

T5-1	B38	A76	T7-1	B38	A76
T5-1	B38	A77	T7-1	B38	A77
T5-1	B38	A78	T7-1	B38	A78
T5-1	B38	A106	T7-1	B38	A106
T5-1	B38	A110	T7-1	B38	A110
T1-1	B39	A2	T2-1	B39	A2
T1-1	B39	A5	T2-1	B39	A5
T1-1	B39	A35	T2-1	B39	A35
T1-1	B39	A37	T2-1	B39	A37
T1-1	B39	A45	T2-1	B39	A45
T1-1	B39	A46	T2-1	B39	A46
T1-1	B39	A49	T2-1	B39	A49
T1-1	B39	A54	T2-1	B39	A54
T1-1	B39	A66	T2-1	B39	A66
T1-1	B39	A67	T2-1	B39	A67
T1-1	B39	A68	T2-1	B39	A68
T1-1	B39	A69	T2-1	B39	A69
T1-1	B39	A70	T2-1	B39	A70
T1-1	B39	A76	T2-1	B39	A76
T1-1	B39	A77	T2-1	B39	A77
T1-1	B39	A78	T2-1	B39	A78
T1-1	B39	A106	T2-1	B39	A106
T1-1	B39	A110	T2-1	B39	A110
T2-2	B39	A2	T2-3	B39	A2
T2-2	B39	A5	T2-3	B39	A5
T2-2	B39	A35	T2-3	B39	A35
T2-2	B39	A37	T2-3	B39	A37
T2-2	B39	A45	T2-3	B39	A45
T2-2	B39	A46	T2-3	B39	A46
T2-2	B39	A49	T2-3	B39	A49
T2-2	B39	A54	T2-3	B39	A54
T2-2	B39	A66	T2-3	B39	A66
T2-2	B39	A67	T2-3	B39	A67
T2-2	B39	A68	T2-3	B39	A68
T2-2	B39	A69	T2-3	B39	A69
T2-2	B39	A70	T2-3	B39	A70
T2-2	B39	A76	T2-3	B39	A76
T2-2	B39	A77	T2-3	B39	A77
T2-2	B39	A78	T2-3	B39	A78
T2-2	B39	A106	T2-3	B39	A106
T2-2	B39	A110	T2-3	B39	A110
T2-4	B39	A2	T2-5	B39	A2

Table 42

T2-4	B39	A5	T2-5	B39	A5
T2-4	B39	A35	T2-5	B39	A35
T2-4	B39	A37	T2-5	B39	A37
T2-4	B39	A45	T2-5	B39	A45
T2-4	B39	A46	T2-5	B39	A46
T2-4	B39	A49	T2-5	B39	A49
T2-4	B39	A54	T2-5	B39	A54
T2-4	B39	A66	T2-5	B39	A66
T2-4	B39	A67	T2-5	B39	A67
T2-4	B39	A68	T2-5	B39	A68
T2-4	B39	A69	T2-5	B39	A69
T2-4	B39	A70	T2-5	B39	A70
T2-4	B39	A76	T2-5	B39	A76
T2-4	B39	A77	T2-5	B39	A77
T2-4	B39	A78	T2-5	B39	A78
T2-4	B39	A106	T2-5	B39	A106
T2-4	B39	A110	T2-5	B39	A110
T5-1	B39	A2	T7-1	B39	A2
T5-1	B39	A5	T7-1	B39	A5
T5-1	B39	A35	T7-1	B39	A35
T5-1	B39	A37	T7-1	B39	A37
T5-1	B39	A45	T7-1	B39	A45
T5-1	B39	A46	T7-1	B39	A46
T5-1	B39	A49	T7-1	B39	A49
T5-1	B39	A54	T7-1	B39	A54
T5-1	B39	A66	T7-1	B39	A66
T5-1	B39	A67	T7-1	B39	A67
T5-1	B39	A68	T7-1	B39	A68
T5-1	B39	A69	T7-1	B39	A69
T5-1	B39	A70	T7-1	B39	A70
T5-1	B39	A76	T7-1	B39	A76
T5-1	B39	A77	T7-1	B39	A77
T5-1	B39	A78	T7-1	B39	A78
T5-1	B39	A106	T7-1	B39	A106
T5-1	B39	A110	T7-1	B39	A110
T1-1	B40	A2	T2-1	B40	A2
T1-1	B40	A5	T2-1	B40	A5
T1-1	B40	A35	T2-1	B40	A35
T1-1	B40	A37	T2-1	B40	A37
T1-1	B40	A45	T2-1	B40	A45
T1-1	B40	A46	T2-1	B40	A46
T1-1	B40	A49	T2-1	B40	A49

Table 43

T1-1	B40	A54	T2-1	B40	A54
T1-1	B40	A66	T2-1	B40	A66
T1-1	B40	A67	T2-1	B40	A67
T1-1	B40	A68	T2-1	B40	A68
T1-1	B40	A69	T2-1	B40	A69
T1-1	B40	A70	T2-1	B40	A70
T1-1	B40	A76	T2-1	B40	A76
T1-1	B40	A77	T2-1	B40	A77
T1-1	B40	A78	T2-1	B40	A78
T1-1	B40	A106	T2-1	B40	A106
T1-1	B40	A110	T2-1	B40	A110
T2-2	B40	A2	T2-3	B40	A2
T2-2	B40	A5	T2-3	B40	A5
T2-2	B40	A35	T2-3	B40	A35
T2-2	B40	A37	T2-3	B40	A37
T2-2	B40	A45	T2-3	B40	A45
T2-2	B40	A46	T2-3	B40	A46
T2-2	B40	A49	T2-3	B40	A49
T2-2	B40	A54	T2-3	B40	A54
T2-2	B40	A66	T2-3	B40	A66
T2-2	B40	A67	T2-3	B40	A67
T2-2	B40	A68	T2-3	B40	A68
T2-2	B40	A69	T2-3	B40	A69
T2-2	B40	A70	T2-3	B40	A70
T2-2	B40	A76	T2-3	B40	A76
T2-2	B40	A77	T2-3	B40	A77
T2-2	B40	A78	T2-3	B40	A78
T2-2	B40	A106	T2-3	B40	A106
T2-2	B40	A110	T2-3	B40	A110
T2-4	B40	A2	T2-5	B40	A2
T2-4	B40	A5	T2-5	B40	A5
T2-4	B40	A35	T2-5	B40	A35
T2-4	B40	A37	T2-5	B40	A37
T2-4	B40	A45	T2-5	B40	A45
T2-4	B40	A46	T2-5	B40	A46
T2-4	B40	A49	T2-5	B40	A49
T2-4	B40	A54	T2-5	B40	A54
T2-4	B40	A66	T2-5	B40	A66
T2-4	B40	A67	T2-5	B40	A67
T2-4	B40	A68	T2-5	B40	A68
T2-4	B40	A69	T2-5	B40	A69
T2-4	B40	A70	T2-5	B40	A70

Table 44

T2-4	B40	A76	T2-5	B40	A76
T2-4	B40	A77	T2-5	B40	A77
T2-4	B40	A78	T2-5	B40	A78
T2-4	B40	A106	T2-5	B40	A106
T2-4	B40	A110	T2-5	B40	A110
T5-1	B40	A2	T7-1	B40	A2
T5-1	B40	A5	T7-1	B40	A5
T5-1	B40	A35	T7-1	B40	A35
T5-1	B40	A37	T7-1	B40	A37
T5-1	B40	A45	T7-1	B40	A45
T5-1	B40	A46	T7-1	B40	A46
T5-1	B40	A49	T7-1	B40	A49
T5-1	B40	A54	T7-1	B40	A54
T5-1	B40	A66	T7-1	B40	A66
T5-1	B40	A67	T7-1	B40	A67
T5-1	B40	A68	T7-1	B40	A68
T5-1	B40	A69	T7-1	B40	A69
T5-1	B40	A70	T7-1	B40	A70
T5-1	B40	A76	T7-1	B40	A76
T5-1	B40	A77	T7-1	B40	A77
T5-1	B40	A78	T7-1	B40	A78
T5-1	B40	A106	T7-1	B40	A106
T5-1	B40	A110	T7-1	B40	A110
T1-1	B41	A2	T2-1	B41	A2
T1-1	B41	A5	T2-1	B41	A5
T1-1	B41	A35	T2-1	B41	A35
T1-1	B41	A37	T2-1	B41	A37
T1-1	B41	A45	T2-1	B41	A45
T1-1	B41	A46	T2-1	B41	A46
T1-1	B41	A49	T2-1	B41	A49
T1-1	B41	A54	T2-1	B41	A54
T1-1	B41	A66	T2-1	B41	A66
T1-1	B41	A67	T2-1	B41	A67
T1-1	B41	A68	T2-1	B41	A68
T1-1	B41	A69	T2-1	B41	A69
T1-1	B41	A70	T2-1	B41	A70
T1-1	B41	A76	T2-1	B41	A76
T1-1	B41	A77	T2-1	B41	A77
T1-1	B41	A78	T2-1	B41	A78
T1-1	B41	A106	T2-1	B41	A106
T1-1	B41	A110	T2-1	B41	A110

Table 45

T2-2	B41	A2	T2-3	B41	A2
T2-2	B41	A5	T2-3	B41	A5
T2-2	B41	A35	T2-3	B41	A35
T2-2	B41	A37	T2-3	B41	A37
T2-2	B41	A45	T2-3	B41	A45
T2-2	B41	A46	T2-3	B41	A46
T2-2	B41	A49	T2-3	B41	A49
T2-2	B41	A54	T2-3	B41	A54
T2-2	B41	A66	T2-3	B41	A66
T2-2	B41	A67	T2-3	B41	A67
T2-2	B41	A68	T2-3	B41	A68
T2-2	B41	A69	T2-3	B41	A69
T2-2	B41	A70	T2-3	B41	A70
T2-2	B41	A76	T2-3	B41	A76
T2-2	B41	A77	T2-3	B41	A77
T2-2	B41	A78	T2-3	B41	A78
T2-2	B41	A106	T2-3	B41	A106
T2-2	B41	A110	T2-3	B41	A110
T2-4	B41	A2	T2-5	B41	A2
T2-4	B41	A5	T2-5	B41	A5
T2-4	B41	A35	T2-5	B41	A35
T2-4	B41	A37	T2-5	B41	A37
T2-4	B41	A45	T2-5	B41	A45
T2-4	B41	A46	T2-5	B41	A46
T2-4	B41	A49	T2-5	B41	A49
T2-4	B41	A54	T2-5	B41	A54
T2-4	B41	A66	T2-5	B41	A66
T2-4	B41	A67	T2-5	B41	A67
T2-4	B41	A68	T2-5	B41	A68
T2-4	B41	A69	T2-5	B41	A69
T2-4	B41	A70	T2-5	B41	A70
T2-4	B41	A76	T2-5	B41	A76
T2-4	B41	A77	T2-5	B41	A77
T2-4	B41	A78	T2-5	B41	A78
T2-4	B41	A106	T2-5	B41	A106
T2-4	B41	A110	T2-5	B41	A110
T5-1	B41	A2	T7-1	B41	A2
T5-1	B41	A5	T7-1	B41	A5
T5-1	B41	A35	T7-1	B41	A35
T5-1	B41	A37	T7-1	B41	A37
T5-1	B41	A45	T7-1	B41	A45
T5-1	B41	A46	T7-1	B41	A46

Table 46

T5-1	B41	A49	T7-1	B41	A49
T5-1	B41	A54	T7-1	B41	A54
T5-1	B41	A66	T7-1	B41	A66
T5-1	B41	A67	T7-1	B41	A67
T5-1	B41	A68	T7-1	B41	A68
T5-1	B41	A69	T7-1	B41	A69
T5-1	B41	A70	T7-1	B41	A70
T5-1	B41	A76	T7-1	B41	A76
T5-1	B41	A77	T7-1	B41	A77
T5-1	B41	A78	T7-1	B41	A78
T5-1	B41	A106	T7-1	B41	A106
T5-1	B41	A110	T7-1	B41	A110
T1-1	B42	A2	T2-1	B42	A2
T1-1	B42	A5	T2-1	B42	A5
T1-1	B42	A35	T2-1	B42	A35
T1-1	B42	A37	T2-1	B42	A37
T1-1	B42	A45	T2-1	B42	A45
T1-1	B42	A46	T2-1	B42	A46
T1-1	B42	A49	T2-1	B42	A49
T1-1	B42	A54	T2-1	B42	A54
T1-1	B42	A66	T2-1	B42	A66
T1-1	B42	A67	T2-1	B42	A67
T1-1	B42	A68	T2-1	B42	A68
T1-1	B42	A69	T2-1	B42	A69
T1-1	B42	A70	T2-1	B42	A70
T1-1	B42	A76	T2-1	B42	A76
T1-1	B42	A77	T2-1	B42	A77
T1-1	B42	A78	T2-1	B42	A78
T1-1	B42	A106	T2-1	B42	A106
T1-1	B42	A110	T2-1	B42	A110
T2-2	B42	A2	T2-3	B42	A2
T2-2	B42	A5	T2-3	B42	A5
T2-2	B42	A35	T2-3	B42	A35
T2-2	B42	A37	T2-3	B42	A37
T2-2	B42	A45	T2-3	B42	A45
T2-2	B42	A46	T2-3	B42	A46
T2-2	B42	A49	T2-3	B42	A49
T2-2	B42	A54	T2-3	B42	A54
T2-2	B42	A66	T2-3	B42	A66
T2-2	B42	A67	T2-3	B42	A67
T2-2	B42	A68	T2-3	B42	A68
T2-2	B42	A69	T2-3	B42	A69

Table 47

T2-2	B42	A70	T2-3	B42	A70
T2-2	B42	A76	T2-3	B42	A76
T2-2	B42	A77	T2-3	B42	A77
T2-2	B42	A78	T2-3	B42	A78
T2-2	B42	A106	T2-3	B42	A106
T2-2	B42	A110	T2-3	B42	A110
T2-4	B42	A2	T2-5	B42	A2
T2-4	B42	A5	T2-5	B42	A5
T2-4	B42	A35	T2-5	B42	A35
T2-4	B42	A37	T2-5	B42	A37
T2-4	B42	A45	T2-5	B42	A45
T2-4	B42	A46	T2-5	B42	A46
T2-4	B42	A49	T2-5	B42	A49
T2-4	B42	A54	T2-5	B42	A54
T2-4	B42	A66	T2-5	B42	A66
T2-4	B42	A67	T2-5	B42	A67
T2-4	B42	A68	T2-5	B42	A68
T2-4	B42	A69	T2-5	B42	A69
T2-4	B42	A70	T2-5	B42	A70
T2-4	B42	A76	T2-5	B42	A76
T2-4	B42	A77	T2-5	B42	A77
T2-4	B42	A78	T2-5	B42	A78
T2-4	B42	A106	T2-5	B42	A106
T2-4	B42	A110	T2-5	B42	A110
T5-1	B42	A2	T7-1	B42	A2
T5-1	B42	A5	T7-1	B42	A5
T5-1	B42	A35	T7-1	B42	A35
T5-1	B42	A37	T7-1	B42	A37
T5-1	B42	A45	T7-1	B42	A45
T5-1	B42	A46	T7-1	B42	A46
T5-1	B42	A49	T7-1	B42	A49
T5-1	B42	A54	T7-1	B42	A54
T5-1	B42	A66	T7-1	B42	A66
T5-1	B42	A67	T7-1	B42	A67
T5-1	B42	A68	T7-1	B42	A68
T5-1	B42	A69	T7-1	B42	A69
T5-1	B42	A70	T7-1	B42	A70
T5-1	B42	A76	T7-1	B42	A76
T5-1	B42	A77	T7-1	B42	A77
T5-1	B42	A78	T7-1	B42	A78
T5-1	B42	A106	T7-1	B42	A106
T5-1	B42	A110	T7-1	B42	A110

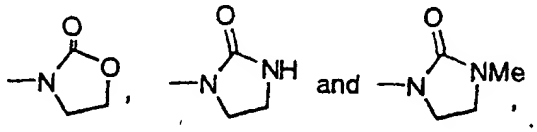
Table 48

T1-1	B43	A2	T2-1	B43	A2
T1-1	B43	A5	T2-1	B43	A5
T1-1	B43	A35	T2-1	B43	A35
T1-1	B43	A37	T2-1	B43	A37
T1-1	B43	A45	T2-1	B43	A45
T1-1	B43	A46	T2-1	B43	A46
T1-1	B43	A49	T2-1	B43	A49
T1-1	B43	A54	T2-1	B43	A54
T1-1	B43	A66	T2-1	B43	A66
T1-1	B43	A67	T2-1	B43	A67
T1-1	B43	A68	T2-1	B43	A68
T1-1	B43	A69	T2-1	B43	A69
T1-1	B43	A70	T2-1	B43	A70
T1-1	B43	A76	T2-1	B43	A76
T1-1	B43	A77	T2-1	B43	A77
T1-1	B43	A78	T2-1	B43	A78
T1-1	B43	A106	T2-1	B43	A106
T1-1	B43	A110	T2-1	B43	A110
T2-2	B43	A2	T2-3	B43	A2
T2-2	B43	A5	T2-3	B43	A5
T2-2	B43	A35	T2-3	B43	A35
T2-2	B43	A37	T2-3	B43	A37
T2-2	B43	A45	T2-3	B43	A45
T2-2	B43	A46	T2-3	B43	A46
T2-2	B43	A49	T2-3	B43	A49
T2-2	B43	A54	T2-3	B43	A54
T2-2	B43	A66	T2-3	B43	A66
T2-2	B43	A67	T2-3	B43	A67
T2-2	B43	A68	T2-3	B43	A68
T2-2	B43	A69	T2-3	B43	A69
T2-2	B43	A70	T2-3	B43	A70
T2-2	B43	A76	T2-3	B43	A76
T2-2	B43	A77	T2-3	B43	A77
T2-2	B43	A78	T2-3	B43	A78
T2-2	B43	A106	T2-3	B43	A106
T2-2	B43	A110	T2-3	B43	A110
T2-4	B43	A2	T2-5	B43	A2
T2-4	B43	A5	T2-5	B43	A5
T2-4	B43	A35	T2-5	B43	A35
T2-4	B43	A37	T2-5	B43	A37
T2-4	B43	A45	T2-5	B43	A45
T2-4	B43	A46	T2-5	B43	A46

Table 49

T2-4	B43	A49	T2-5	B43	A49
T2-4	B43	A54	T2-5	B43	A54
T2-4	B43	A66	T2-5	B43	A66
T2-4	B43	A67	T2-5	B43	A67
T2-4	B43	A68	T2-5	B43	A68
T2-4	B43	A69	T2-5	B43	A69
T2-4	B43	A70	T2-5	B43	A70
T2-4	B43	A76	T2-5	B43	A76
T2-4	B43	A77	T2-5	B43	A77
T2-4	B43	A78	T2-5	B43	A78
T2-4	B43	A106	T2-5	B43	A106
T2-4	B43	A110	T2-5	B43	A110
T5-1	B43	A2	T7-1	B43	A2
T5-1	B43	A5	T7-1	B43	A5
T5-1	B43	A35	T7-1	B43	A35
T5-1	B43	A37	T7-1	B43	A37
T5-1	B43	A45	T7-1	B43	A45
T5-1	B43	A46	T7-1	B43	A46
T5-1	B43	A49	T7-1	B43	A49
T5-1	B43	A54	T7-1	B43	A54
T5-1	B43	A66	T7-1	B43	A66
T5-1	B43	A67	T7-1	B43	A67
T5-1	B43	A68	T7-1	B43	A68
T5-1	B43	A69	T7-1	B43	A69
T5-1	B43	A70	T7-1	B43	A70
T5-1	B43	A76	T7-1	B43	A76
T5-1	B43	A77	T7-1	B43	A77
T5-1	B43	A78	T7-1	B43	A78
T5-1	B43	A106	T7-1	B43	A106
T5-1	B43	A110	T7-1	B43	A110

[0043] Furthermore, the compounds having the above-mentioned structure wherein - X'-Y' is one selected from a group of $OCH_2CH=CMe_2$, OCH_2-2-furyl, OCH_2-3-furyl, $OCH_2C{\equiv}CMe$, $NHCH_2CH=CMe_2$, $N(iPr)SO_2NHMe$, $NHCH(Me)CH_2OMe$, NHiPr, NH-iBu, NHc-Pent, $NHCH_2$c-Hex, NHc-Hex, NHc-Hex-4-(=NOMe), NHcHex-4, 4-$(OMe)_2$, $NHCH_9C_6H_4$-4-$B(OH)_2$, $NHCH_2C_6H_4$-2-OH, $NHCH_2C_6H_3$-3,4-$(OH)_2$, $NHCH_2C_6H_2$-3, 4, 5-$(OMe)_3$, $NHCH_2C_6H_4$-4-COOH, $NHCH_2C_6H_4$-4-OH, $NHCH_2C_6H_4$-3-OH, $NHCH_2$-2-furyl, $NHCH_2$-3-furyl, NH-4-tetrahydropyran, $NHCH_2$-benzopyrrolyl, $NHCH_2$-2-thiazolyl, $NHCH_2$-quinolyl, NHcHex-4, 4-ethylenedioxy, 1-pyrolidinyl, 4-morpholinyl, 1-piperadinyl, 4-thioinorpholinyl, 1-piperidyl,

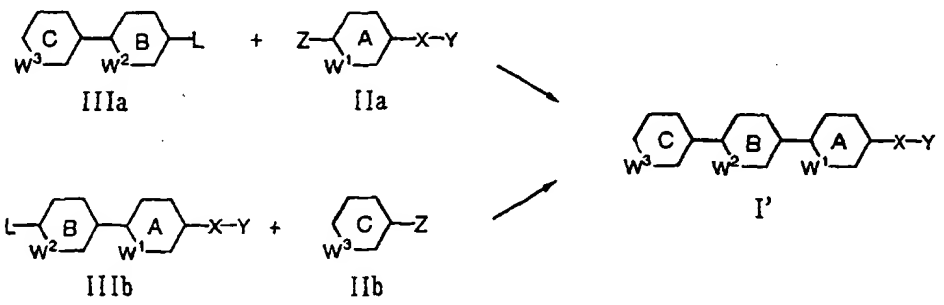


are preferable. The compounds wherein -X'-Y' is $-OCH_2$-2-furyl, $-NHCH_2CH=CMe_2$ or $-OCH_2CH=CMe_2$ are more preferable.

[0044] A process for producing the compound (I) is as follows.

A process for producing the compound (I')

[0045] A compound of the following formula (I') (hereinafter referred to as "a compound (I')") can be produced by reacting a compound of the formula (IIa) (hereinafter referred to as "a compound (IIa)") with a bicyclic compound of the formula (IIIa) (hereinafter referred to as "a compound (IIIa)") or by reacting a compound of the formula (IIb) (hereinafter referred to as "a compound (IIb)") with a bicyclic compound of the formula (IIIb) (hereinafter referred to as "a compound (IIIb)").



wherein either of L and Z is dihydroxyborane, di(lower)alkyl borane or di(lower) alkoxyborane and the other is halogen or $-OSO_2(C_qF_{2q+1})$ (q is an integer of 0 to 4) and other symbols are the same as defined above.

[0046] The compound (I') can be produced by reacting the compound (IIa) with the compound (IIIa) or by reacting the compound (IIb) with the compound (IIIb) in a mixture of an appropriate solvent such as benzene, toluene, N, N-dimethylformamide, dimethoxyethane, tetrahydrofuran, dioxane, ethanol, methanol or the like and water or in an anhydrous solution in the presence of a palladium catalyst such as $Pd(PPh_3)_4$, $PdCl_2(PPh_3)_2$, $PdCl_2(OAc)_2$, $PdCl_2(CH_3CN)_2$ or the like, preferably $Pd(PPh_3)_4$, under a basic condition (for example, by K_3PO_4, $NaHCO_3$, NaOEt, Na_2CO_3, Et_4NCl, $Ba(OH)_2$, Cs_2CO_3, CsF, NaOH, Ag_2CO_3 or the like) at room temperature or with heating for several tens minutes to several tens hours.

[0047] One of substituents L and Z of the compounds to be reacted may be any of the borane groups which are applicable in the Suzuki Reaction (Chemical Communication 1979, 866, Journal of Synthetic Organic Chemistry, Japan, 1993, Vol.51, No.11, 91-100) and dihydroxyborane is preferable. The other maybe any of the leaving groups which are applicable in the Suzuki Reaction, for example, halogen, $-OSO_2(C_qF_{2q+1})$ wherein q is an integer of 0 to 4, or the like. Specifically, halogen, trifluoromethanesulfonyloxy (hereinafter referred to as OTf) or the like is preferable and bromine, iodine or OTf is more preferable.

[0048] The other substituents of A ring, B ring and C ring and -X-Y of the compounds (IIa), (IIIa), (IIb) and (IIIb) may be any of the groups which do not affect the Suzuki Reaction, for example, any groups other than halogen and $-OSO_2(C_qF_{2q+1})$ wherein q is an integer of 0 to 4.

[0049] For example, Y may be optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle which may be fused with benzene ring, Y may be optionally substituted lower alkoxy when X is $-CH_2-$ and Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$.

[0050] Even if any substituent of A ring, B ring or C ring is halogen, these reactions can be carried out without difficulty when the reactivity of the substituent L with the substituent Z is higher than that of halogen with either of substituents L and Z.

[0051] Even if either of substituents of A ring, B ring and C ring or -X-Y is hydroxy, the above reactions can be preferably carried out. Preferably the above reactions may be carried out after the protection of hydroxy group with a usual hydroxy-protecting group such as methoxymethyl, benzyl, tert-butyldimethylsilyl, methanesulfonyl, p-toluenesulfonyl or the like, followed by deprotection by the usual methods.

[0052] As processes for producing the compound (I'), the above mentioned Suzuki Reaction is most preferable in view of the efficiency and easiness but silicon, zinc, tin or the like can be used in place of the borane group in the above scheme.

[0053] For example, in the case that one of A and Z is $-SiR^{17}{}_{3-r}(Hal)_r$ wherein R^{17} are independently lower alkyl, Hal is halogen and r is an integer of 1 to 3 and the other is halogen or $-OSO_2(C_qF_{2q+1})$ wherein q is an integer of 0 to

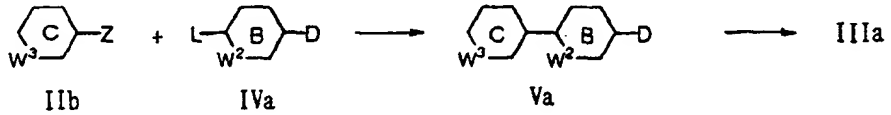
4, the coupling reaction may be carried out using a usual palladium catalyst (Synlett (1991) 845-853, J. Org. Chem. 1996, 61, 7232-7233). Examples of preferable palladium catalysts are $(i\text{-}Pr_3P)_2PdCl_2$, [(dcpe)$PdCl_2$] (dcpe=$Cy_2PCH_2CH_2PCy_2$), $(\eta^3\text{-}C_3H_5PdCl)_2$ and the like.

[0054] Even in the case that one of L and Z is $-SnR^{18}{}_3$ wherein R^{18} are each independently lower alkyl and the other is halogen, acetyloxy or $-OSO_2(C_qF_{2q+1})$ wherein q is an integer of 0 to 4, an objective compound can be obtained using a usual palladium catalyst (preferably $Pd(PPh_3)_4$ or the like) (Angew. Chem. Int. Ed. Engl. 25 (1986) 508-524).

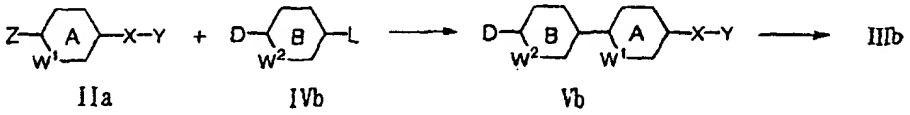
[0055] In the case that one of L and Z is -Zn(Hal) wherein Hal is halogen and the other is halogen, an objective compound can be obtained (Acc. Chem. Res. 1982, 15, 340-348). Any usual palladium catalyst is applicable and $Pd(PPh_3)_4$, $PdCl_2$(dppf), $PdCl_2(PPh_3)_2$, $PdCl_2(P(o\text{-}Tolyl)_3)_2$, $Pd(OAc)_2$ and the like are exemplified as preferable examples.

[0056] All of these reactions may be carried out in a suitable solvent such as N,N-dimethylformamide, tetrahydrofuran or the like at room temperature or with heating for several tens minutes to several tens hours.

[0057] As compound (IIIa) and (IIIb) in the above reactions, may be used known compounds or compounds which are derived from a compound of the following formula (Va) (hereinafter referred to as "a compound (Va)") or the following formula (Vb) (hereinafter referred to as "a compound (Vb)") which can be produced by the known method or the following method.



IIb IVa Va IIIa



IIa IVb Vb IIIb

wherein D is any of the groups which do not affect the Suzuki Reaction of L with Z, and may be the same group as L when a compound of the formula (IVb) is a bisymmetric compound. The other symbols are the same as above.

[0058] The compound (IIb) is reacted with the compound (IVa) or the compound (IIa) is reacted with (IVb) to give the compound (Va) or (Vb). When the compound (IVa) or (IVb) is not a bisymmetric compound. D is preferably a group which does not affect the Suzuki Reaction of L with Z and can be easily converted to L. For example, hydroxy, hydrogen, formyl, nitro or the like is preferable. In the reaction of L with Z, silicon, zinc, tin or the like can be used in place of the borane group as mentioned above.

[0059] D is converted into a group L which is applicable to the Suzuki Reaction.

[0060] A compound wherein D is hydroxy may be reacted with a trifluoromethanesulfonating agent such as trifluoromethanesulfonic anhydride, trifluoromethansulfonyl chloride, N-phenyltrifluoromethanesulfone imide or the like in a suitable solvent such as dichloromethane, chloroform, tetrahydrofuran or benzene in the presence of a base such as sodium hydride, pyridine, triethylamine, potassium carbonate or the like at -20 °C or with heating for several minutes to several tens hours to give an objective compound wherein L is OTf.

[0061] For example, a compound wherein D is hydrogen may be reacted with a halogenating agent such as bromine, chlorine, iodine, N-bromosuccinimide or the like in a suitable solvent such as acetic acid, dichloromethane, chloroform, carbon tetrachloride, benzene, water or the like at -20 °C or with heating for several minutes to several tens hours to give an objective compound wherein L is halogen.

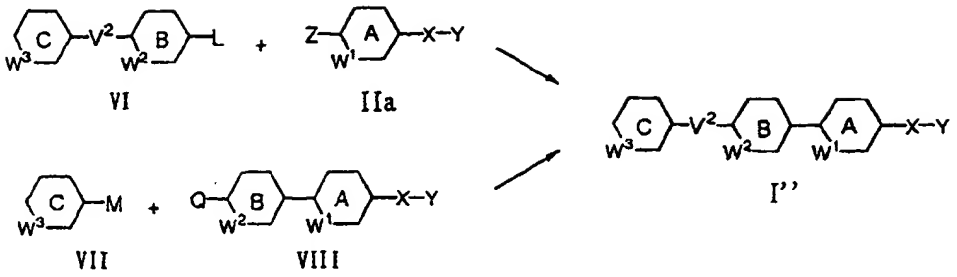
[0062] A compound wherein D is formyl may be oxidated by the Baeyer-Villiger reaction to give a compound wherein D is formyloxy, followed by hydrolysis to give a compound wherein D is hydroxy. The compound wherein L is OTf can be obtained by the similar process as mentioned above.

[0063] A compound wherein D is nitro may be reduced to give a compound wherein D is amino, followed by the Sandmeyer Reaction to give a compound L is halogen.

A process for producing the compound (I")

[0064] A compound of the following formula (I") (hereinafter referred to as "a compound (I")") can be produced by the Suzuki Reaction of a compound of the formula (VI) (hereinafter referred to as "a compound (VI)") with a compound of the formula (IIa) (hereinafter referred to as "a compound (IIa)") or by condensation of a compound of the formula (VII) (hereinafter referred to as "a compound (VII)") with a compound of the formula (VIII) (hereinafter referred to as "a com-

pound (VIII)").



wherein either of M and Q is hydroxy or amino and the other is halogen, lower alkylsulfonyloxy, arylsulfonyloxy, lower alkylsulfonyl, arylsulfonyl or methyl having them as substituents,
either of M and Q is lithium or Mg(Hal) wherein Hal is halogen and the other is carboxy, lower alkoxycarbonyl, carbamoyl or formyl,
either of M and Q is formyl and the other is halogenomethyl, or
either of M and Q is ethynyl and the other is halogen; and the other symbols are the same as defined above.

[0065] Various conditions for a reaction of the compound (VI) with the compound (IIa) are the same as those for the process for producing the compound (I').

[0066] In a reaction of the compound (VII) with a compound (VIII), when V^2 of an objective compound is -O-, -NH-, $-OCH_2-$, $-CH_2O-$ or $-NHCH_2-$, either of M and Q is hydroxy or amino and the other is a leaving group such as halogen, lower alkylsulfonyloxy, arylsulfonyloxy, lower alkylsulfonyl, arylsulfonyl or the like or methyl having the leaving group as substituents. These two compounds are reacted in a suitable solvent such as benzene, toluene, acetone, acetonitrile, N,N-dimethylformamide, dimethylsulfoxide, pyridine, methanol, ethanol or the like in the presence of a base such as sodium hydride, pyridine, triethylamine, potassium carbonate, sodium hydroxide, potassium hydroxide or the like, if necessary by adding a copper catalyst such as copper powder, CuCl, CuO or the like at 0 °C or with heating for several minutes to several tens hours to give the objective compound.

[0067] In a reaction of the compound (VII) with the compound (VIII), when V^2 of an objective compound is -CO- or -CH(OH)-, either of M and Q is an organic metal such as lithium or Mg(Hal) wherein Hal is halogen and the other is carboxy, lower alkoxycarbonyl, carbamoyl or formyl. These two compounds are reacted in a suitable solvent such as diethylether, tetrahydrofuran, dimethoxyethan, dioxane or the like at - 78 °C to with heating for several minutes to several hours to give an objective compound.

[0068] When V^2 of an objective compound is -CH(OR)- wherein R is lower alkyl, after a compound wherein V^2 is -CH(OH)- is obtained, the obtained compound may be subjected to alkylation.

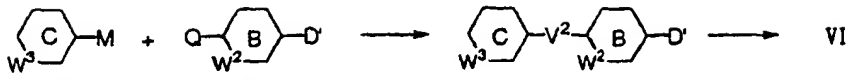
[0069] A compound wherein V^2 is -CO- may be obtained by reacting a compound wherein V^2 is -CH(OH)- with an oxidizing agent such as chromic anhydride, Jone's reagent or the like in a solvent such as t-butylalcohol, acetone or the like depending on the oxidizing agent at 0 °C or with heating for several hours. A compound wherein V^2 is -CH(OH)- can be obtained also by reacting a compound wherein V^2 is - CO-with an reducing agent such as sodium borohydride, aluminium lithium hydride or the like in a suitable solvent such as diethyl ether, tetrahydrofuran, dimethoxyethane, dioxane, methanol, ethanol or the like.

[0070] When a compound wherein V^2 of an objective compound is -CH=CH-, either of M and Q is formyl and the other is halogenomethyl (for example, halogen is chloro, bromo or iodo). An objective compound can be obtained by the Wittig Reaction (Organic Reaction, vol.14, p. 270, 1965).

[0071] When V^2 of an objective compound is -CH=CH-, either of M and Q is ethynyl and the other is halogen (preferably bromo or iodo). The objective compound can be synthesized by a coupling reaction with a generally used palladium catalyst (for example, Synthesis, (1980) 627, Tetrahedron, 1982, 38, 631).

[0072] Other substituents of A ring, B ring, C ring and -X-Y of the compound (VI), (IIa), (VII) and (VIII) may be any substituent which does not affect the Suzuki Reaction of L with Z or a condensing reaction of M with Q. Even if in a reaction of the compound (VI) with the compound (IIa) wherein either of substituents is halogen, this reaction may be carried out without difficulty if the reactivity of a substituent L with a substituent Z is higher than the reactivity with halogen. Even if either of substituents is hydroxy, the above reaction can be carried out. Preferably hydroxy is previously protected, followed a deprotection after the above reaction.

[0073] As the compound (VI) in the above scheme, it may be used a known compound or a compound of the formula (X) which is synthesized in the following method.



VII IX X VI

wherein D' is a group which does not affect a condensing reaction of M with Q and when a compound of the formula (IX) is a symmetric compound, D' may be the same group as Q, and the other symbols are the same as defined above.

[0074] When the compound (IX) is not a symmetric compound, D' is preferably a group which does not affect the condensing reaction of M with Q and which can easily be converted to L. For example, hydrogen, formyl, protected hydroxy, nitro or the like is preferable. As a hydroxy-protecting group, exemplified are benzyl, t-butyldimethylsilyl, methoxymethyl and the like. A method for converting D' to L is similar to the above method for converting D to L. Other various conditions are similar to that for reacting the compound (VII) with the compound (VIII).

[0075] A known compound may be used as a compound (VIII) in the above reaction scheme and a compound synthesized by the usual method or derived from the above compound (Vb) by the usual method also may be used.

[0076] In the case that a compound has a substituent interfering of the above reaction, the substituent may be protected with a suitable protecting group in advance and the protecting group may be removed in a suitable step by the usual method. For example, if hydroxy interferes the reaction, it may be protected with methoxymethyl, methanesulfonyl, benzyl, trifluoromethanesulfonyl, tert-butyldimethylsilyl or the like, followed by deprotection in a suitable step.

[0077] For example, for a protection of hydroxy with methanesulfonyl, a compound which has hydroxy may be reacted with methanesulfonyl chloride in a solvent such as dichloromethane, chloroform, carbon tetrachloride or the like in the presence of a base such as triethylamine, pyridine or the like under ice-cooling or at room temperature for several hours. The protected compound may be deprotected with 1-4 N sodium hydroxide, potassium hydroxide, aqueous solution thereof, sodium methoxide, ethyl magnesium bromide or the like in a solvent such as dimethylsulfoxide, dimethylformamide, tetrahydrofuran, dioxane, dimethoxyethane or the like at room temperature or with heating for several tens minutes to several hours.

[0078] When methoxymethyl is used as a hydroxy-protecting group, a compound which has hydroxy may be reacted with chloromethylmethylether in a solvent such as tetrahydrofuran, dioxane, dimethoxyethane or the like in the presence of sodium hydride, diisopropylethylamine or the like to give a compound which has a protected hydroxy group. The compound may be subjected to a usual deprotection reaction with hydrochloric acid, sulfuric acid or the like in a solvent such as methanol, tetrahydrofuran, acetic acid or the like for a deprotection.

[0079] When tert-butyldimethylsilyl is used as a protecting group, a compound which has hydroxy may be reacted with tert-butyldimethylsilyl chloride, tert-butyldimethylsilyl triflate or the like in a solvent such as dimethylformamide, acetonitrile, tetrahydrofuran, dimethylformamide, dichloromethane or the like in the presence of imidazole, triethylamine, 2, 6-lutidine or the like. For a deprotection reaction the protected compound may be reacted with tetrabutylammonium fluoride or the like in a solvent such as tetrahydrofuran or the like.

[0080] A compound of the present invention thus obtained can be converted into a prodrug thereof. The term "prodrug" includes compounds which can easily be converted to the compound having the activity of the present invention in a living body. Any usual method for conversion into a prodrug may be used.

[0081] For example, hydroxy or amino which is attached to any possible position of a compound of the present invention may be substituted with a usual group for manufacturing a prodrug. For example, substituted acyl (wherein the substituent is carboxy, sulfo, amino, lower alkylamino or the like), phosphonoxy or the like may be introduced into the hydroxy, and substituted alkoxycarbonyl (wherein the substituent is halogen, acyloxy, hydroxyacyloxy, carboxyacyloxy, heterocyclylcarbonyloxy or the like) or substituted alkyl (wherein the substituent is aroylamino which may be substituted with acyloxy(lower)alkoxy or the like) may be introduced into the amino.

[0082] More definitely, when A ring or C ring has hydroxy as a substituent, a substituent such as -$COCH_2CH_2COOH$, -COCH=CHCOOH, -$COCH_2SO_3H$, -PO_3H_2, -$COCH_2NMe_2$, -CO-Py wherein Py is pyridine or the like may be introduced. When A ring or C ring has amino as a substituent(e.g.,X, X' or the like), -$COOCH_2O(C=O)CH_2OH$, -$COOCH_2O(C=O)CH_2CH_9COOH$, -$COOCH_2OAc$, - COOCH(Me)OAc, - COOCH(Me)OCOCMe$_3$, -$COOCH_2OCO(CH_2)_{14}Me$, - $COOCH_2OCO$-Pyr, -CH_2NHCO-C_6H_4-o-OCH_2OAc or the like may be introduced.

[0083] The immunosuppressant or anti-allergic agent of the present invention is useful for prevention or treatment of allergic diseases such as rejection symptom against transplantation of an organ or a tissue, graft-versus-host reaction caused by bone marrow transplantation, atopic allergic diseases (for example, bronchial asthma, allergic rhinitis, allergic dermatitis and the like), hypereosinophils syndrome, allergic conjunctivitis, systemic lupus erythematosus, polymyositis, dermatomyositis, seleriasis, MCTD, chronic rheumatoid arthritis, inflammatory bowel disease, injury caused by ischemia-reperfusion, pollenosis, allergic rhinitis, urticaria, psoriasis and the like.

[0084] A compound of the present invention can be administered orally or parenterally as a immunosuppressant, anti-allergic agent and/or suppressant on the IgE production. In the case of oral administration, it may be in any usual form such as tablets, granules, powders, capsules, pills, solutions, syrups, buccal tablets, sublingual tablets and the like. When the compound is parenterally administered, any usual form is preferable, for example, injections (e.g., intravenous. intramuscular), suppositories, endermic agents, vapors and the like. Oral administration is particularly preferable.

[0085] A pharmaceutical composition may be manufactured by mixing an effective amount of a compound of the present invention with various pharmaceutical ingredients suitable for the administration form, such as excipients, binders, moistening agents, disintegrators, lubricants, diluents and the like. When the composition is of an injection, an active ingredient can be sterilized with a suitable carrier to give a pharmaceutical composition.

[0086] Specifically, examples of the excipients include lactose, saccharose, glucose, starch, calcium carbonate, crystalline cellulose and the like, examples of the binders include methylcellulose, carboxymethylcellulose, hydroxypropylcellulose, gelatin, polyvinylpyrrolidone and the like, examples of the disintegrators include carboxymethylcellulose, sodium carboxymethylcellulose, starch, sodium alginate, agar, sodium lauryl sulfate and the like, and examples of the lubricants include talc, magnesium stearate, macrogol and the like. Cacao oil, macrogol, methyl cellulose and the like may be used as base materials of suppositories. When the composition is manufactured as solutions, emulsified injections or suspended injections, dissolving accelerators, suspending agents, emulsifiers, stabilizers, preservatives, isotonic agents and the like may be added. For oral administration, sweetening agents, flavors and the like may be added.

[0087] Although the dosage of a compound of the present invention as an immunosuppressant, anti-allergic agent and/or suppressant on the IgE production should be determined in consideration of the patient's age and body weight, the type and degree of diseases, the administration route or the like, a usual oral dosage for human adults is 0.05 - 100 mg/kg/day and preferable is 0.1 - 10 mg/kg/day. For parenteral administration, although the dosage highly varies with administration routes, a usual dosage is 0.005 - 10 mg/kg/day, preferably, 0.01 - 1 mg/kg/day. The dosage may be administered in one or several divisions per day.

[0088] The present invention is further explained by the following Examples and Experiments, which are not intended to limit the scope of the present invention.

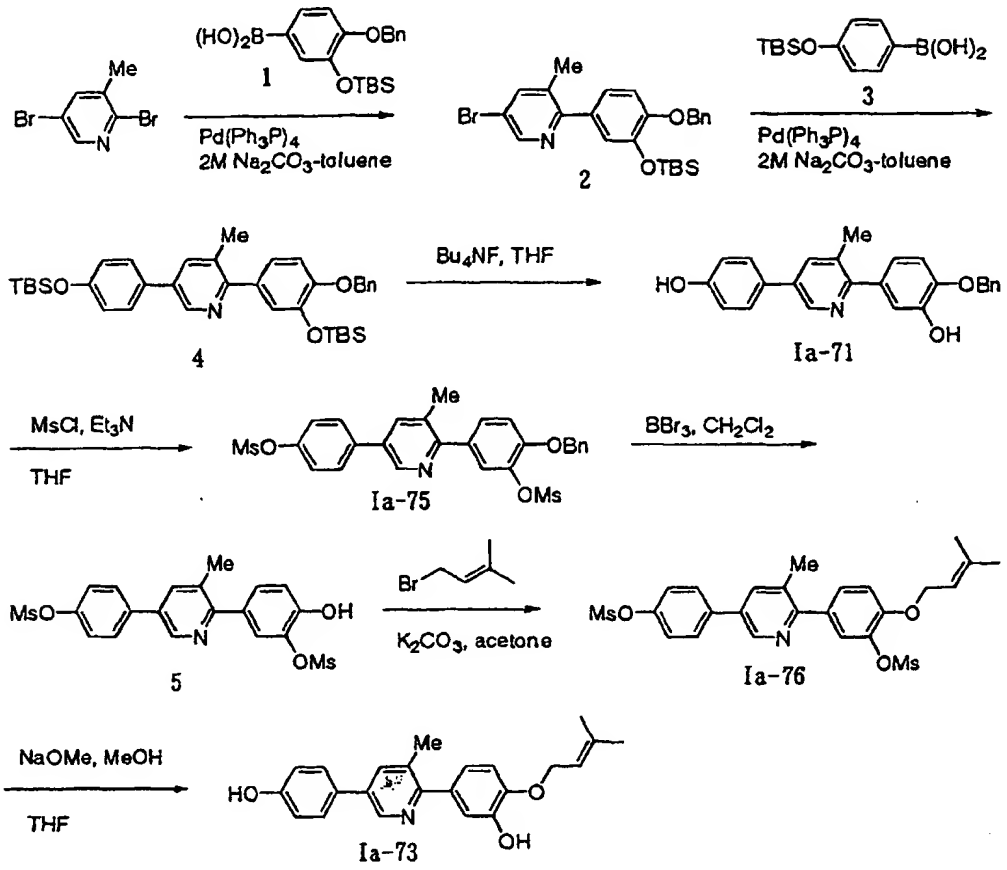
EXAMPLE

[0089] The abbreviations used in EXAMPLE mean the following.

Ac	acetyl
Bn	benzyl
Et	ethyl
^{i}Pr	isopropyl
Me	methyl
Ms	methanesulfonyl
Ph	phenyl
Py	pyridyl
TBS	tert-butyldimethylsilyl
TFAA	trifluoroacetic anhydride
THF	tetrahydrofuran

Example 1 Synthesis of compounds (Ia-71), (Ia-73), (Ia-75) and (Ia-76)

[0090]



(Step 1) Synthesis of compound (2)

[0091] To a solution of 831 mg (2.32 mmol) of compound (1) (WO98/04508, Reference Example 1) in 12 ml of toluene were added 701 mg (2.79 mmol) of 2, 5-dibromo-3-methylpyridine, 80 mg (0.07 mmol) of tetrakis(triphenylphosphin)palladium (0), and 6 ml of an aqueous solution of 2 M sodium carbonate at room temperature. The mixture was heated refluxed under a nitrogen atmosphere for 4 hours. After cooling, the mixture was diluted with water and extracted with ethyl acetate. The extract was washed with saturated brine, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl 97:3) to give compound (2) (808 mg; 60 % yield).

(Step 2) Synthesis of compound (4)

[0092] According to the method of Step 1, 404 mg (0.83 mmol) of compound (2) was reacted with 231 mg (0.92 mmol) of boronic acid (3) (GB 2276162 A) to give compound (4) (411 mg; 81 % yield).

(Step 3) Synthesis of compound (Ia-71)

[0093] To a solution of 411 mg (0.67 mmol) of compound (4) in 3.4 ml of tetrahydrofuran was added a solution of 1 M tetrabutyl ammonium fluoride in 1.4 ml (1.40 mmol) of tetrahydrofuran and the mixture was stirred for 3 hours. The solution was poured into an aqueous solution of 5 % potassium hydrogen sulfate and extracted with ethyl acetate. The extract was washed with saturated brine, dried and concentrated. The residue was crystallized from ethyl acetate to

give compound (Ia-71) (247 mg; 96 % yield).

(Step 4) Synthesis of compound (Ia-75)

[0094] To a solution of 227 mg (0.59 mmol) of compound (Ia-71) in 3 ml of tetrahydrofuran were added 0.17 ml (1.18 mmol) of triethylamine and 0.07 ml (0.89 mmol) of methanesulfonyl chloride successively and the mixture was stirred for 20 hours at room temperature. The solution was diluted with ethyl acetate, washed with water, 5 % aqueous solution of sodium hydrogencarbonate and saturated saline successively, dried and concentrated. The residue was crystallized from hexane-ethyl acetate to give compound (Ia-75) (303 mg; 95 % yield).

(Step 5) Synthesis of compound (5)

[0095] To a solution of 283 mg (0.52 mmol) of compound (Ia-75) in 2.6 ml of dichloromethane was added a solution of 1 M boron tribromide in 0.63 ml (0.63 mmol) of dichloromethane at - 78 °C and the mixture was stirred for an hour at the same temperature. After the excessive reagent was decomposed by addition of methanol, the solution was poured into 5 % aqueous solution of sodium hydrogencarbonate and extracted with ethyl acetate. The extract was washed with saturated brine, dried and concentrated. The residue was crystallized from hexane-ethyl acetate to give compound (5) (204 mg; 87 % yield).

(Step 6) Synthesis of compound (Ia-76)

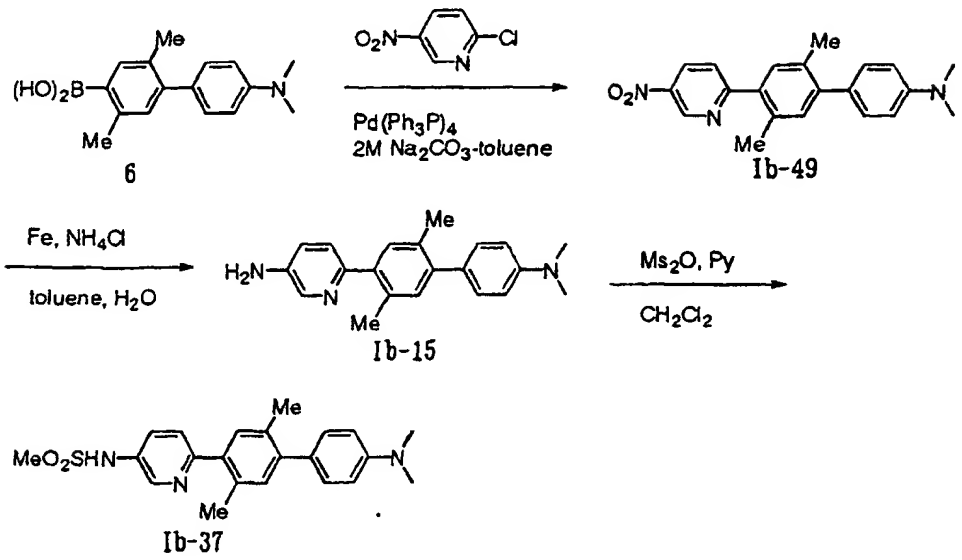
[0096] To a solution of 184 mg (0.41 mmol) of compound (5) in 2 ml of acetone were added 169 mg (1.23 mmol) of potassium carbonate and 0.12 ml (1.02 mmol) of prenyl bromide successively and the mixture was stirred for 14 hours at room temperature. The solution was diluted ethyl acetate, washed with water and saturated brine successively, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 1:1) and crystallized from hexane-ethyl acetate to give compound (Ia-76) (170 mg; 80 % yield).

(Step 7) Synthesis of compound (Ia-73)

[0097] To a solution of 149 mg (0.29 mmol) of compound (Ia-76) in 1.4 ml of tetrahydrofuran was added a solution of 28 % sodium methoxide in 0.6 ml (2.89 mmol) of methanol under ice-cooling and the mixture was stirred at room temperature for 17 hours. The solution was poured into 5 % aqueous solution of ammonium chloride and extracted with ethyl acetate. The extract was washed with saturated brine, dried and concentrated. After the residue was purified by silica gel chromatography (hexane-ethyl 7:3), the obtained product was crystallized from diethylether-hexane to give compound (Ia-73) (88mg; 84 % yield).

Example 2 Synthesis of compounds (Ib-15), (Ib-37) and (Ib-49)

[0098]



(Step 1) Synthesis of compound (Ib-49)

[0099] According to the method of Example 1 Step 1, 200mg (0.74 mmol) of boronic acid (6) was reacted with 236 mg (1.49 mmol) of 2-chloro-5-nitropyridine to give compound (Ib-49) (232 mg; 90 % yield).

(Step 2) Synthesis of compound (Ib-15)

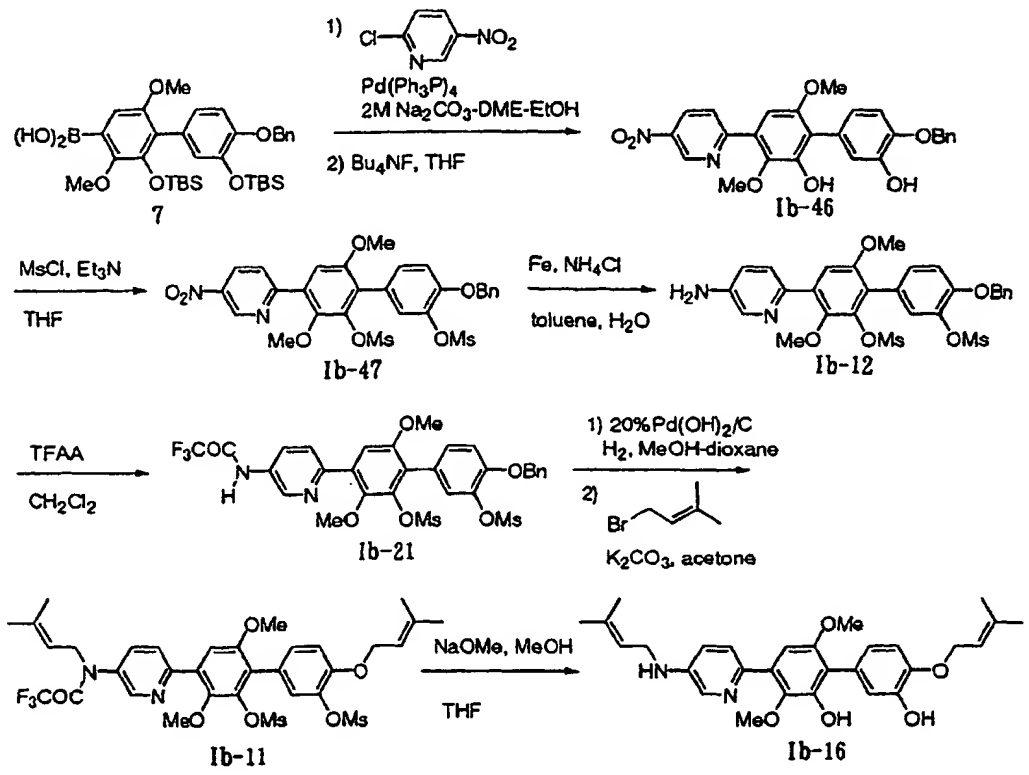
[0100] To a solution of 257 mg (0.74 mmol) of compound (Ib-49) in 5 ml of toluene were added 5 ml of water, 207 mg (3.70 mmol) of iron powder and 213 mg (3.70 mmol) of ammonium chloride and the mixture was refluxed for 15 hours. After cooling, insoluble material was filtered off with celite. The filtrate was extracted with ethyl acetate and the extract was washed with saturated brine, dried and concentrated. After the residue was purified by silica gel chromatography (hexane-ethyl acetate 1:3), the obtained product was crystallized from ethyl acetate to give compound (Ib-15) (161 mg; 69 % yield).

(Step 3) Synthesis of compound (Ib-37)

[0101] To a solution of 130 mg (0.41 mmol) of compound (Ib-15) in 4 ml of dichloromethane were added 0.05 ml (0.61 mmol) of pyridine and 86 mg (0.49 mmol) of methanesulfonic anhydride under ice-cooling and the mixture was stirred for an hour. The solution was diluted with ethyl acetate, washed with water, 5 % aqueous solution of sodium hydrogencarbonate and saturated brine successively, dried and concentrated. The residue was crystallized from ethyl acetate to give compound (Ib-37) (124 mg; 77 % yield).

Example 3 Synthesis of compounds of (Ib-11), (Ib-12), (Ib-16), (Ib-21), (Ib-46) and (Ib-47)

[0102]



(Step 1) Synthesis of compound (Ib-46)

[0103] To a mixture of a solution of 867 mg (1.36 mmol) of compound (7) (WO98/04508, Reference Examples 4 and 6) in 16 ml of 1, 2-dimethoxyethane and 5 ml of ethanol were added 200 mg (1.26 mmol) of 2-chloro-5-nitropyridine, 44 mg(0.04 mmol) of tetrakis(triphenylphosphine)palladium (0) and 5 ml of aqueous solution of 2 M sodium carbonate at room temperature and the solution was refluxed under a nitrogen atmosphere for 3 hours. After cooling, the mixture was diluted with water and extracted with ethyl acetate. The extract was washed with saturated brine, dried, concentrated and the obtained residue was dissolved in 6 ml of tetrahydrofuran. To the solution was added a solution of 1 M tetrabutylammonium fluoride in 2 ml (2.02 mmol) of tetrahydrofuran under ice-cooling and the mixture was stirred for 1.5 hours. After the solution was poured into water and extracted with ethyl acetate, the extract was washed with saturated brine, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 7:3) and crystallized from hexane-ethyl acetate to give compound (Ib-46) (472 mg; 79 % yield).

(Step 2) Synthesis of compound (Ib-47)

[0104] According to the method of Example 1 Step 4, a solution of 458 mg (0.97 mmol) of compound (Ib-46) in 4.8 ml of tetrahydrofuran was treated with 0.40 ml (2.89 mmol) of triethylamine and 0.19 ml (2.41 mmol) of methanesulfonyl chloride to give compound (Ib-47) (572 mg; 94 % yield).

(Step 3) Synthesis of compound (Ib-12)

[0105] According to the method of Example 2 Step 2, 547 mg (0.87 mmol) of compound (Ib-47) was treated with

242 mg (4.34 mmol) of iron powder and 232 mg (4.34 mmol) of ammonium chloride to give compound (Ib-12) (461 mg;89 % yield).

(Step 4) Synthesis of compound (Ib-21)

[0106] To a solution of 110 mg (0.18 mmol) of compound (Ib-12) in 1.8 ml of dichloromethane was added 0.03 ml (0.22 mmol) of trifluoroacetic anhydride under ice-cooling and the mixture was stirred for 2 hours at room temperature. The solution was diluted with ethyl acetate, washed with water, 5 % aqueous solution of sodium hydrogencarbonate and saturated brine successively, dried and concentrated. The residue was crystallized from diethylether-hexane to give compound (Ib-21) (122 mg: 96 % yield).

(Step 5) Synthesis of compound (Ib-11)

[0107] A mixture of 122 mg (0.18 mmol) of compound (Ib-21), 24 mg of 20 % palladium hydroxide-carbon in 1.8 ml of methanol and 1.8 ml of 1,4-dioxane was stirred for 15 hours under a nitrogen atmosphere at room temperature. After an insoluble material was filtered off with celite, the filtrate was concentrated to give 110 mg of the residue.

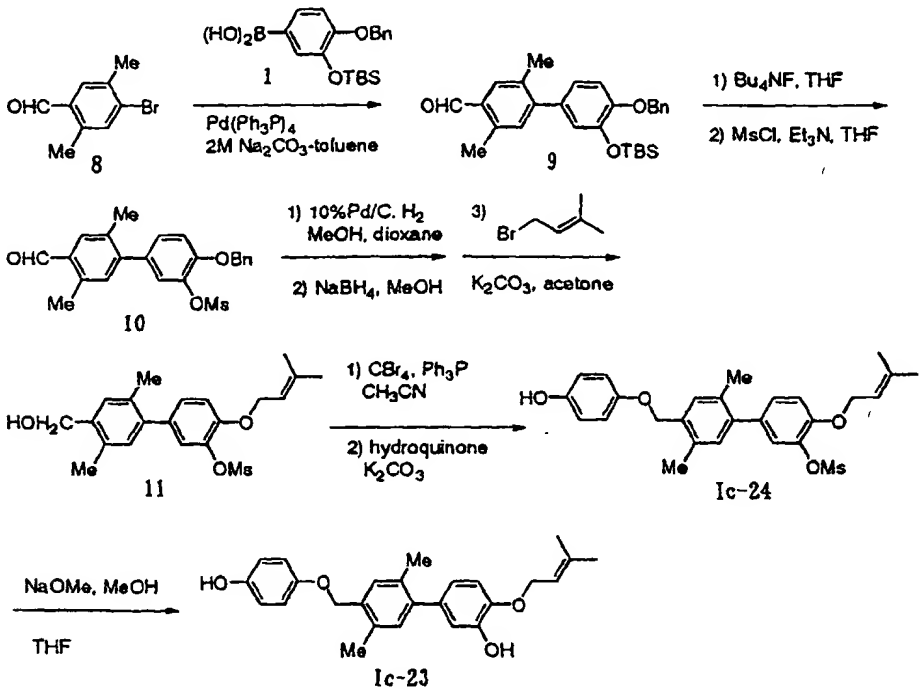
[0108] To a solution of the residue in 3.5 ml of N,N-dimethylformamide were added 73 mg (0.53 mmol) of potassium carbonate and 0.05 ml (0.39 mmol) of prenyl bromide successively and the mixture was stirred for 4 hours. The solution was diluted with ethyl acetate, washed with water and saturated brine successively, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 7:3) and crystallized from diethyl ether-hexane to give compound (Ib-11) (121 mg, 9.3 % yield).

(Step 6) Synthesis of compound (Ib-16)

[0109] According to the method of Example 1 Step 7, compound (Ib-16) was obtained (73 mg; 99 % yield) from 111 mg (0.15 mmol) of compound (Ib-111).

Example 4 Synthesis of compounds (Ic-23) and (Ic-24)

[0110]



(Step 1) Synthesis of compound (9)

[0111] According to the method of Example 1 Step 1, 500 mg (2.35 mmol) of compound (8) was reacted with 883 mg (2.46 mmol) of boronic acid (1) to give compound (9) (983 mg; 94 % yield).

(Step 2) Synthesis of compound (10)

[0112] To a solution of 983 mg (2.20 mmol) of compound (9) in 10 ml of tetrahydrofuran was added 1 M tetrabutylammonium fluoride in 2.2 ml (2.20 mmol) of tetrahydrofuran under ice-cooling and the mixture was stirred for an hour at room temperature. The solution was poured into water, extracted with ethyl acetate, washed with saturated brine, dried and concentrated. The residue was dissolved in 10 ml of tetrahydrofuran, then 0.46 ml (3.29 mmol) of triethylamine and 0.20 ml (2.64 mmol) of methanesulfonyl chloride was successively added to the solution under ice-cooling and the mixture was stirred for 30 minutes at the same temperature. The solution was diluted with ethyl acetate, washed with water, 5 % aqueous solution of sodium hydrogencarbonate, saturated brine successively, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 7:3) to give compound (10) (881 mg; 98 % yield).

(Step 3) Synthesis of compound (11)

[0113] A solution of 120 mg (0.29 mmol) of compound (10) and 11 mg of 10 % palladium-carbon in 2 ml of methanol and 2 ml of 1,4-dioxane was stirred under a nitrogen atmosphere at room temperature for 2 hours. An insoluble material was filtered off with celite and the filtrate was concentrated. To a solution of the residue in 3 ml of methanol was added 11 mg (0.29 mmol) of sodium borohydride under ice-cooling and the mixture was stirred for 30 minutes. The solution was poured into water and extracted with ethyl acetate. The extract was washed with saturated brine, dried and concentrated. To a solution of the obtained crude product in 3 ml of acetone were added 122 mg (0.88 mmol) of potassium carbonate and 0.10 ml (0.88 mmol) of prenyl bromide successively and the mixture was stirred for 2 hours at room temperature. The mixture was diluted with ethyl acetate and washed with water and saturated brine successively, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 7:3) to give compound (11) (108 mg; 95 % yield).

(Step 4) Synthesis of compound (Ic-24)

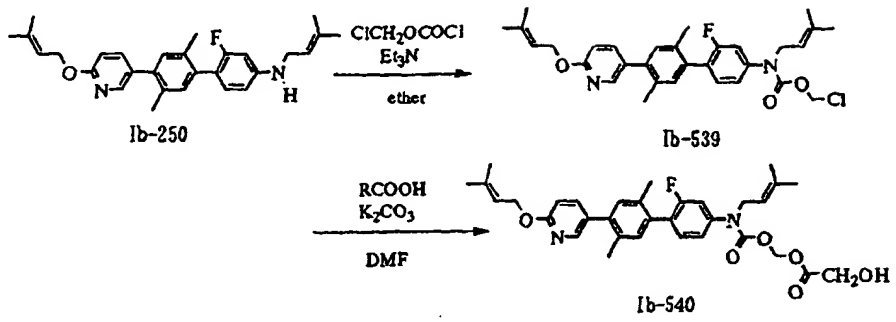
[0114] To a solution of 108 mg (0.28 mmol) of compound (11) in 2 ml of acetonitrile were added 87 mg (0.33 mmol) of triphenylphosphine and 110 mg (0.33 mmol) of carbon tetrabromide under ice-cooling and the mixture was stirred for 1 hour at room temperature. To the mixture were added 152 mg (1.38 mmol) of hydroquinone and 114 mg (0.83 mmol) of potassium carbonate and the mixture was stirred for 20 hours at room temperature. The mixture was poured into diluted hydrochloric acid and extracted with ethyl acetate. The extract was washed with an aqueous solution of 5 % sodium hydrogencarbonate and saturated brine, dried and concentrated. The residue was purified by silica gel chromatography (hexane-ethyl acetate 7:3) to give compound (Ic-24) (61 mg; 46 % yield).

(Step 5) Synthesis of compound (Ic-23)

[0115] According to the method of Example 1 Step 7, compound (Ic-23) was obtained (34 mg; 69 % yield) from 59 mg (0.12 mmol) of compound (Ic-24).

Example 5 Synthesis of compounds (Ib-539) and (Ib-540)

[0116]



(Step 1) Synthesis of compound (Ib-539)

[0117] The compound (Ib-250) (444 mg, 1 mmol) was dissolved in anhydrous ether (40 mL) under ice-cooling, Chloromethyl chloroformate (194 mg, 1 mmol) and triethylamine (210 ml, 1 mmol) were added successively to the solution under a nitrogen atmosphere with stirred, and the mixture was stirred for 4 hours without ice-cooling. Precipitate in the reaction mixture was filtered off and the filtrate was washed with water, dried over sodium sulfuric anhydride and concentrated under reduced pressure to give 540 mg of compound (Ib-539) as oil.

Elementary Analysis for $C_{31}H_{34}N_2O_3FCl$					
Calculated:	C, 69.33;	H, 6.38;	N, 5.22;	F, 3.54;	Cl, 6.60.
Analyzed :	C, 68.85;	H, 6.42;	N, 5.21;	F, 3.58;	Cl, 7.06.

(Step 2) Synthesis of compound (Ib-540)

[0118] A mixture of glycol acid (38 mg, 0.5 mmol), potassium carbonate (35 mg, 0.25 mmol) and N,N-dimethylformamide (1mL) was stirred under reduced pressure at room temperature for 10 minutes. A solution of compound 1 (54 mg, 0.1 mmol) in N,N-dimethylformamide (0.5 ml) and potassium bromide (12 mg, 0.1 mmol) were added and the mixture was vigorously stirred for 20 hours under an argon atmosphere. The mixture was diluted with ether (5 ml) and an insoluble material was filtered off. The filtrate was washed with water, dried over sodium sulfate anhydride and concentrated under reduced pressure. The residual crude product was purified by silica gel chromatography (elution solvent: hexane-ethyl acetate (2:1)) to give 27 mg of compound (Ib-540) as an oil.

Elementary Analysis for $C_{33}H_{37}N_2O_6F$				
Calculated:	C, 68.73;	H, 6.47;	N, 4.86;	F, 3.29.
Analyzed:	C, 68.59;	H, 6.68;	N, 4.98;	F, 3.25.

Example 6 Synthesis of compound (Ib-541)

[0119] A mixture of succinic acid (590 mg, 5 mmol), potassium carbonate (345 mg, 2.5 mmol) and N,N-dimethylformamide (6 ml) was stirred for 10 minutes under reduced pressure at room temperature. The solution of compound (Ib-539) (537 mg, 1mmol) in N,N-dimethylformamide (5 ml) obtained by the method in Example 5 Step 1 and sodium iodide

(70 mg, 0.5 mmol) were successively added and vigorously stirred for 5 days under an argon atmosphere. The mixture was poured into an aqueous solution of 5 % acetic acid and extracted with ether-hexane (4:1). After the obtained mixture was dried over anhydrous sodium sulfate, the solvent was removed off. The residual crude product was purified by silica gel chromatography (elution solvent: chloroform-methanol (20:1)) to give 60 mg of compound (Ib-541) as an oil.

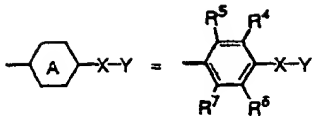
Elementary Analysis for $C_{35}H_{39}N_2O_7F$				
Calculated:	C, 67.95;	H, 6.35;	N, 4.53;	F, 3.07.
Analyzed:	C, 68.25;	H, 5.96;	N, 4.64;	F, 3.13.

LSIMS: m/Z = 618 $[M+H]^+$

Example 7 Synthesis of other compounds (I)

[0120] Using analogous procedure, the following compounds (I) were synthesized. The structures and physical constants are shown below. Tables 50 to 55 represents partial structures used in Table 56 or later as abbreviations, A1, A2, ... B1, B2, ... C1, C2 ....

Table 50



	R^4	R^5	R^6	R^7	X	Y
A1	H	H	H	H	O	H
A2	H	H	H	H	O	CH_2-2-furyl
A3	H	H	H	H	O	$CH_2C_6H_5$
A4	H	H	H	H	O	$CH_2C_6H_4$-4-Me
A5	H	H	H	H	O	$CH_2CH=CMe_2$
A6	OH	H	H	H	O	$CH_2C_6H_5$
A7	OAc	H	H	H	O	$CH_2C_6H_5$
A8	OMs	H	H	H	O	$CH_2C_6H_5$
A9	OSO_2CF_3	H	H	H	O	$CH_2C_6H_5$
A10	OSO_2Ph	H	H	H	O	$CH_2C_6H_5$
A11	OMe	H	H	H	O	$CH_2C_6H_5$
A12	OH	H	H	H	O	$CH_2C_6H_4$-2-Me
A13	OH	H	H	H	O	$CH_2C_6H_4$-3-Me
A14	OH	H	H	H	O	$CH_2C_6H_4$-4-Me
A15	OMs	H	H	H	O	$CH_2C_6H_4$-2-Me
A16	OMs	H	H	H	O	$CH_2C_6H_4$-3-Me
A17	OMs	H	H	H	O	$CH_2C_6H_4$-4-Me
A18	OH	H	H	H	O	$CH_2C_6H_4$-2-OMe
A19	OH	H	H	H	O	$CH_2C_6H_4$-3-OMe
A20	OH	H	H	H	O	$CH_2C_6H_4$-4-OMe
A21	OMs	H	H	H	O	$CH_2C_6H_4$-2-OMe
A22	OMs	H	H	H	O	$CH_2C_6H_4$-3-OMe
A23	OMs	H	H	H	O	$CH_2C_6H_4$-4-OMe
A24	OH	H	H	H	O	CH_2-2-Py
A25	OH	H	H	H	O	CH_2-3-Py
A26	OH	H	H	H	O	CH_2-4-Py
A27	OMs	H	H	H	O	CH_2-2-Py
A28	OMs	H	H	H	O	CH_2-3-Py
A29	OMs	H	H	H	O	CH_2-4-Py
A30	OH	H	H	H	O	$CH_2CH_2C_6H_5$
A31	OMs	H	H	H	O	$CH_2CH_2C_6H_5$
A32	OH	H	H	H	O	$CH_2CH=CMe_2$
A33	OMs	H	H	H	O	$CH_2CH=CMe_2$
A34	OH	H	H	H	O	$CH_2CH=CCl_2$
A35	OMe	H	H	H	O	$CH_2CH=CMe_2$

Table 51

	R^4	R^5	R^6	R^7	X	Y
A36	OMe	H	H	H	O	$CH_2CH=CCl_2$
A37	F	H	H	H	O	$CH_2CH=CMe_2$
A38	F	H	H	H	O	$CH_2CH=CCl_2$
A39	OH	H	H	H	O	$CH_2CH_2CH=CMe_2$
A40	OMs	H	H	H	O	$CH_2CH_2CH=CMe_2$
A41	H	H	H	H	NMe	Me
A42	H	H	H	H	NH	H
A43	H	H	H	H	NH	Me
A44	H	H	H	H	NH	iPr
A45	H	H	H	H	NH	$CH_2CH=CH_2$
A46	H	H	H	H	NH	$CH_2CH=CMe_2$
A47	H	H	H	H	NH	$CH_2C\equiv CH$
A48	H	H	H	H	NH	c-Hex
A49	H	H	H	H	NH	CH_2-c-Hex
A50	H	H	H	H	NH	$CH_2C_6H_5$
A51	H	H	H	H	NH	$CH_2C_6H_4$-4-COOMe
A52	H	H	H	H	NH	$CH_2C_6H_4$-4-COOH
A53	H	H	H	H	NH	CH_2-4-Pyr
A54	H	H	H	H	NH	CH_2-2-furyl
A55	H	H	H	H	NH	CH_2-3-furyl
A56	H	H	H	H	NH	CH_2-2-thienyl
A57	H	H	H	H	NH	CH_2-3-thienyl
A58	H	H	H	H	$NCH_2CH=CMe_2$	SO_2NHMe
A59	H	H	H	H	NMe	SO_2NH_2
A60	OMe	H	H	H	NH	$CH_2CH=CMe_2$
A61	OMe	H	H	H	NH	$CH_2C_6H_5$
A62	Me	H	H	H	NH	$CH_2CH=CMe_2$
A63	Me	H	H	H	NH	$CH_2C_6H_5$
A64	H	F	H	H	NH	H
A65	H	F	H	H	NH	iPr
A66	H	F	H	H	NH	iBu
A67	H	F	H	H	NH	$CH_2CH=CMe_2$
A68	H	F	H	H	NH	cPent
A69	H	F	H	H	NH	cHex
A70	H	F	H	H	NH	CH_2cHex
A71	H	F	H	H	NH	$CH_2C_6H_4$-4-Et
A72	H	F	H	H	NH	$CH_2C_6H_4$-4-iPr
A73	H	F	H	H	NH	$CH_2C_6H_4$-4-COOH
A74	H	F	H	H	NH	$CH_2C_6H_4$-4-COOMe
A75	H	F	H	H	N-iPr	SO_2NH_2
A76	H	F	H	H	N-iPr	SO_2NHMe
A77	H	F	H	H	$NCH_2CH=CMe_2$	SO_2NHMe

Table 52

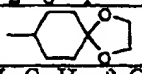
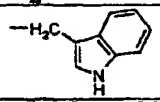
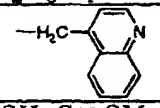
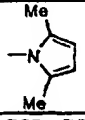
	R^4	R^5	R^6	R^7	X	Y
A78	F	H	H	H	NH	$CH_2CH=CMe_2$
A79	F	H	H	H	NH	$CH_2C_6H_5$
A80	H	Cl	H	H	NH	H
A81	H	Cl	H	H	NH	$CH_2CH=CMe_2$
A82	H	Cl	H	H	NH	cHex
A83	H	Cl	H	H	NH	CH_2cHex
A84	Cl	H	H	H	NH	$CH_2CH=CMe_2$
A85	Cl	H	H	H	NH	$CH_2C_6H_5$
A86	H	H	H	H	NH	4-tetrahydropyran
A87	H	H	H	H	NH	C_6H_4-4-$B(OH)_2$
A88	H	H	H	H	NH	$CH_2C_6H_4$-2-OMe
A89	H	H	H	H	NH	$CH_2C_6H_2$-3,4,5-$(OMe)_3$
A90	H	H	H	H	NH	$CH(Me)CH_2OMe$
A91	H	H	H	H	NH	CH_2cHex-4,4-$(OMe)_2$
A92	H	H	H	H	NH	$CH_2C_6H_3$-3,4-$(OH)_2$
A93	H	H	H	H	NH	$CH_2C_6H_4$-4-OH
A94	H	H	H	H	NH	
A95	H	H	H	H	NH	$CH_2C_6H_4$-3-OH
A96	H	H	H	H	N-pyrrorvl	
A97	H	H	H	H	NH	CH_2-2-thienyl
A98	H	H	H	H	NH	cHex-4-(=NOMe)
A99	H	H	H	H	NH	CH_2-2-Thiazol
A100	H	H	H	H	NH	
A101	H	H	H	H	NH	$CH_2C_6H_4$-4-OMe
A102	H	H	H	H	NH	
A103	H	H	H	H	O	$CH_2C\equiv CMe$
A104	H	Me	H	H	NH	$CH_2CH=CMe_2$
A105	H	Me	H	H	NH	$CH_2C_6H_5$
A106	H	F	H	H	NH	$CH_2C_6H_5$
A107	F	H	H	H	O	H
A108	F	H	H	H	O	Me
A109	F	H	H	H	O	CH_2-2-furyl
A110	F	H	H	H	O	$CH_2C_6H_5$
A111	H	H	H	H		
A112	H	H	H	H	S	$CH_2CH=CMe_2$
A113	H	H	H	H	SO_2	NH_2
A114	H	F	H	H	SO_2	NH_2

Table 53

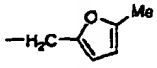
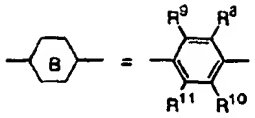
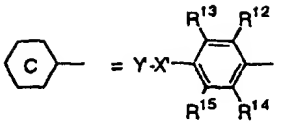
	R^4	R^5	R^6	R^7	X	Y
A115	H	H	H	H	NH	
A116	H	H	H	H	NH	$CH_2C(Me)=CHMe$
A117	H	H	H	H	NH	$CH_2C\equiv CMe$
A118	H	H	H	H	$NCH_2CH=CMe_2$	$CH_2CH=CMe_2$
A119	H	F	H	H	$NCOOCH_2Cl$	$CH_2CH=CMe_2$
A120	H	F	H	H	$NCOOCH_2OCOCH_2OH$	$CH_2CH=CMe_2$
A121	H	F	H	H	$NCOOCH_2OCOCH_2CH_2COOH$	$CH_2CH=CMe_2$
A122	H	F	H	H	$NCOOCH_2OCOMe$	$CH_2CH=CMe_2$
A123	H	F	H	H	NCOOCH(Me)OCOMe	$CH_2CH=CMe_2$
A124	H	F	H	H	$NCOOCH(Me)OCOCMe_3$	$CH_2CH=CMe_2$
A125	H	F	H	H	$NCOOCH2OCO(CH_2)_{14}Me$	$CH_2CH=CMe_2$
A126	H	F	H	H	$NCOOCH_2OCO$-3-Pyr	$CH_2CH=CMe_2$
A127	H	F	H	H	NCH_2NHCO-C_6H_4-o-OCH_2OCOMe	$CH_2CH=CMe_2$
A128	H	H	H	H	$NCOOCH_2OCOCH_2OH$	$CH_2CH=CMe_2$
A129	H	H	H	H	$NCOOCH_2OCOMe$	$CH_2CH=CMe_2$
A130	H	H	H	H	$NCOOCH(Me)OCOCMe_3$	$CH_2CH=CMe_2$
A131	H	H	H	H	$NCOOCH_2OCO$-3-Pyr	$CH_2CH=CMe_2$
A132	F	H	H	H	$NCOOCH_2OCO$ CH_2CH_2COOH	$CH_2CH=CMe_2$
A133	F	H	H	H	NCOOCH(Me)OCOMe	$CH_2CH=CMe_2$
A134	F	H	H	H	$NCOOCH_2OCO(CH_2)_{14}Me$	$CH_2CH=CMe_2$
A135	F	H	H	H	NCH_2NHCO-C_6H_4-o-OCH_2OCOMe	$CH_2CH=CMe_2$
A136	H	F	H	H	$NCOOCH_2OCOCH_2OH$	cPent
A137	H	F	H	H	$NCOOCH_2OCOMe$	cPent
A138	H	F	H	H	$NCOOCH(Me)OCOCMe_3$	cPent
A139	H	F	H	H	$NCOOCH_2OCO$-3-Pyr	cPent
A140	H	Cl	H	H	$NCOOCH_2OCO$ CH_2CH_2COOH	$CH_2CH=CMe_2$
A141	H	Cl	H	H	NCOOCH(Me)OCOMe	$CH_2CH=CMe_2$
A142	H	Cl	H	H	$NCOOCH2OCO(CH_2)_{14}Me$	$CH_2CH=CMe_2$
A143	H	Cl	H	H	NCH_2NHCO-C_6H_4-o-OCH_2OCOMe	$CH_2CH=CMe_2$

Table 54



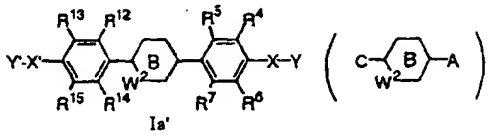
	R^8	R^9	R^{10}	R^{11}
B1	OMe	H	H	OMe
B2	OMe	H	OH	OMe
B3	OMe	H	OMs	OMe
B4	Me	H	H	Me
B5	Me	H	OH	Me
B6	Me	H	OMs	Me
B7	Me	Me	Me	Me
B8	Me	Me	OMe	Me
B9	Me	Me	OH	Me
B10	Me	Me	Me	OMe
B11	Me	Me	Me	OH
B12	OMe	Me	Me	OMe
B13	Me	H	Me	Me
B14	Me	Me	H	Me
B15	Me	H	F	Me
B16	Me	F	H	Me
B17	OMe	H	H	Me
B18	Me	H	H	OMe
B19	Cl	H	H	Cl
B20	OEt	H	H	OEt
B21	OiPr	H	H	OiPr
B22	OcPr	H	H	OcPr
B23	OMe	Me	Me	COOMe
B24	Me	Me	Me	COOMe
B25	SMe	H	H	SMe
B26	SEt	H	H	SEt
B27	COOMe	Me	Me	OMe
B28	Me	Me	Me	Cl
B29	Me	OMe	H	Me
B30	COOMe	Me	Me	Me
B31	Cl	Me	Me	Me
B32	H	Me	Me	Cl
B33	Me	H	Cl	Me
B34	H	Me	Cl	H
B35	Me	H	H	Cl
B36	Me	Me	H	H
B37	H	Me	H	Me
B38	Me	H	Me	H
B39	OMe	OMe	H	H
B40	H	OMe	H	OMe
B41	OMe	H	OMe	H
B42	H	Me	H	OMe
B43	OMe	H	Me	H

Table 55

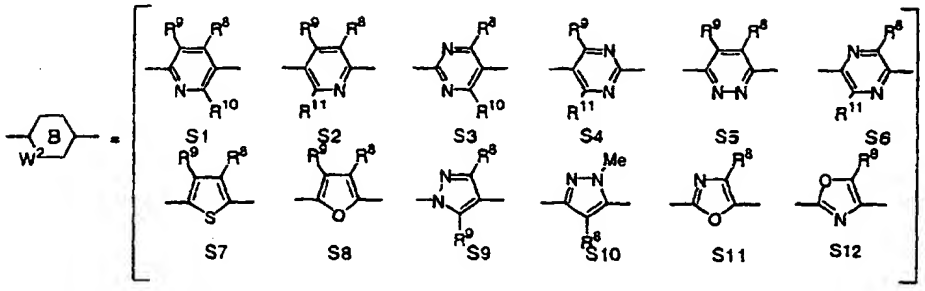


	R^{12}	R^{13}	R^{14}	R^{15}	-X'-Y'
C1	H	H	H	H	H
C2	H	H	H	H	OH
C3	H	H	H	H	OMs
C4	H	H	H	H	OMe
C5	H	H	H	H	NH_2
C6	H	H	H	H	NMe_2
C7	H	H	H	H	SMe
C8	H	H	H	H	Ms
C9	H	H	H	H	F
C10	H	CF_3	H	H	H
C11	H	NO_2	H	H	H
C12	H	NH_2	H	H	H
C13	H	NHAc	H	H	H
C14	H	NHMs	H	H	H
C15	H	$N(Ms)CH_2CH=CMe_2$	H	H	H
C16	H	OH	H	H	$OCH_2C_6H_5$
C17	H	OMs	H	H	$OCH_2C_6H_5$
C18	H	OH	H	H	$OCH_2CH=CMe_2$
C19	H	OMe	H	H	$OCH_2CH=CMe_2$
C20	H	OMs	H	H	$OCH_2CH=CMe_2$
C21	NO_2	H	H	H	H
C22	NH_2	H	H	H	H
C23	NHAc	H	H	H	H
C24	NHMs	H	H	H	H
C25	Cl	H	H	H	NO_2
C26	Cl	H	H	H	NH_2
C27	Cl	H	H	H	NHMs
C28	Cl	H	H	H	$NHCOCF_3$
C29	Cl	H	H	H	$NHCH_2CH=CMe_2$
C30	H	H	H	H	$NHCH_2CH=CMe_2$

Table 56



Ia'



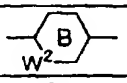
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-1	S1	H	H	H	–	A6	C2
Ia-2	S1	H	H	H	–	A32	C2
Ia-3	S1	H	H	H	–	A35	C2
Ia-4	S1	H	H	H	–	A6	C3
Ia-5	S1	H	H	H	–	A8	C3
Ia-6	S1	H	H	H	–	A33	C3
Ia-7	S1	H	H	H	–	A35	C3
Ia-8	S1	H	H	H	–	A6	C4
Ia-9	S1	H	H	H	–	A8	C4
Ia-10	S1	H	H	H	–	A32	C4
Ia-11	S1	H	H	H	–	A33	C4
Ia-12	S1	H	H	H	–	A8	C17
Ia-13	S1	H	H	H	–	A32	C18
Ia-14	S1	H	H	H	–	A33	C19
Ia-15	S1	H	H	Cl	–	A6	C2
Ia-16	S1	H	H	Cl	–	A32	C2
Ia-17	S1	H	H	Cl	–	A8	C3
Ia-18	S1	H	H	Cl	–	A33	C3
Ia-19	S1	H	H	Cl	–	A35	C6
Ia-20	S1	Me	H	H	–	A6	C2
Ia-21	S1	Me	H	H	–	A32	C2
Ia-22	S1	Me	H	H	–	A35	C2
Ia-23	S1	Me	H	H	–	A6	C3
Ia-24	S1	Me	H	H	–	A8	C3
Ia-25	S1	Me	H	H	–	A33	C3
Ia-26	S1	Me	H	H	–	A35	C3
Ia-27	S1	H	Me	H	–	A6	C2

Table 57

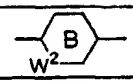
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-28	S1	H	Me	H	–	A32	C2
Ia-29	S1	H	Me	H	–	A35	C2
Ia-30	S1	H	Me	H	–	A6	C3
Ia-31	S1	H	Me	H	–	A8	C3
Ia-32	S1	H	Me	H	–	A33	C3
Ia-33	S1	H	Me	H	–	A35	C3
Ia-34	S1	H	H	Me	–	A6	C2
Ia-35	S1	H	H	Me	–	A32	C2
Ia-36	S1	H	H	Me	–	A35	C2
Ia-37	S1	H	H	Me	–	A6	C3
Ia-38	S1	H	H	Me	–	A8	C3
Ia-39	S1	H	H	Me	–	A33	C3
Ia-40	S1	H	H	Me	–	A35	C3
Ia-41	S1	H	Me	Me	–	A6	C2
Ia-42	S1	H	Me	Me	–	A32	C2
Ia-43	S1	H	Me	Me	–	A35	C2
Ia-44	S1	H	Me	Me	–	A37	C2
Ia-45	S1	H	Me	Me	–	A6	C3
Ia-46	S1	H	Me	Me	–	A8	C3
Ia-47	S1	H	Me	Me	–	A33	C3
Ia-48	S1	H	Me	Me	–	A35	C3
Ia-49	S1	H	Me	Me	–	A6	C6
Ia-50	S1	H	Me	Me	–	A32	C6
Ia-51	S1	H	Me	Me	–	A34	C6
Ia-52	S1	H	Me	Me	–	A35	C6
Ia-53	S1	H	Me	Me	–	A36	C6
Ia-54	S1	H	Me	Me	–	A37	C6
Ia-55	S1	H	Me	Me	–	A38	C6
Ia-56	S1	Me	Me	Me	–	A6	C2
Ia-57	S1	Me	Me	Me	–	A32	C2
Ia-58	S1	Me	Me	Me	–	A35	C2
Ia-59	S1	Me	Me	Me	–	A37	C2
Ia-60	S1	Me	Me	Me	–	A6	C3
Ia-61	S1	Me	Me	Me	–	A8	C3
Ia-62	S1	Me	Me	Me	–	A33	C3
Ia-63	S1	Me	Me	Me	–	A35	C3
Ia-64	S2	H	H	–	H	A6	C2

Table 58

No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-65	S2	H	H	–	H	A8	C2
Ia-66	S2	H	H	–	H	A32	C2
Ia-67	S2	H	H	–	H	A35	C2
Ia-68	S2	H	H	–	H	A8	C3
Ia-69	S2	H	H	–	H	A33	C3
Ia-70	S2	H	H	–	H	A35	C3
Ia-71	S2	Me	H	–	H	A6	C2
Ia-72	S2	Me	H	–	H	A8	C2
Ia-73	S2	Me	H	–	H	A32	C2
Ia-74	S2	Me	H	–	H	A35	C2
Ia-75	S2	Me	H	–	H	A8	C3
Ia-76	S2	Me	H	–	H	A33	C3
Ia-77	S2	Me	H	–	H	A35	C3
Ia-78	S2	H	Me	–	H	A6	C2
Ia-79	S2	H	Me	–	H	A8	C2
Ia-80	S2	H	Me	–	H	A32	C2
Ia-81	S2	H	Me	–	H	A35	C2
Ia-82	S2	H	Me	–	H	A8	C3
Ia-83	S2	H	Me	–	H	A33	C3
Ia-84	S2	H	Me	–	H	A35	C3
Ia-85	S2	H	H	–	Me	A6	C2
Ia-86	S2	H	H	–	Me	A8	C2
Ia-87	S2	H	H	–	Me	A32	C2
Ia-88	S2	H	H	–	Me	A35	C2
Ia-89	S2	H	H	–	Me	A8	C3
Ia-90	S2	H	H	–	Me	A33	C3
Ia-91	S2	H	H	–	Me	A35	C3
Ia-92	S2	Me	H	–	Me	A6	C2
Ia-93	S2	Me	H	–	Me	A8	C2
Ia-94	S2	Me	H	–	Me	A32	C2
Ia-95	S2	Me	H	–	Me	A35	C2
Ia-96	S2	Me	H	–	Me	A8	C3
Ia-97	S2	Me	H	–	Me	A33	C3
Ia-98	S2	Me	H	–	Me	A35	C3
Ia-99	S2	Me	H	–	Me	A6	C6
Ia-100	S2	Me	H	–	Me	A32	C6
Ia-101	S2	Me	H	–	Me	A34	C6

Table 59

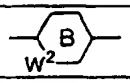
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-102	S2	Me	H	–	Me	A35	C6
Ia-103	S2	Me	H	–	Me	A36	C6
Ia-104	S2	Me	H	–	Me	A37	C6
Ia-105	S2	Me	H	–	Me	A38	C6
Ia-106	S2	Me	Me	–	Me	A6	C2
Ia-107	S2	Me	Me	–	Me	A8	C2
Ia-108	S2	Me	Me	–	Me	A32	C2
Ia-109	S2	Me	Me	–	Me	A35	C2
Ia-110	S2	Me	Me	–	Me	A8	C3
Ia-111	S2	Me	Me	–	Me	A33	C3
Ia-112	S2	Me	Me	–	Me	A35	C3
Ia-113	S2	Me	Me	–	Me	A6	C6
Ia-114	S2	Me	Me	–	Me	A32	C6
Ia-115	S2	Me	Me	–	Me	A34	C6
Ia-116	S2	Me	Me	–	Me	A35	C6
Ia-117	S2	Me	Me	–	Me	A37	C6
Ia-118	S3	Me	–	H	–	A6	C2
Ia-119	S3	Me	–	H	–	A32	C2
Ia-120	S3	Me	–	H	–	A35	C2
Ia-120	S3	OMe	–	H	–	A6	C2
Ia-121	S3	OMe	–	H	–	A32	C2
Ia-122	S3	OMe	–	H	–	A35	C2
Ia-123	S3	Me	–	Me	–	A6	C2
Ia-124	S3	Me	–	Me	–	A32	C2
Ia-125	S3	Me	–	OMe	–	A11	C1
Ia-126	S3	Me	–	Me	–	A35	C2
Ia-127	S3	Me	–	OMe	–	A3	C1
Ia-128	S3	Me	–	OMe	–	A4	C1
Ia-129	S3	Me	–	OMe	–	A5	C1
Ia-131	S3	Me	–	OMe	–	A6	C1
Ia-132	S3	Me	–	OMe	–	A7	C1
Ia-133	S3	Me	–	OMe	–	A8	C1
Ia-134	S3	Me	–	OMe	–	A9	C1
Ia-135	S3	Me	–	OMe	–	A10	C1
Ia-136	S3	Me	–	OMe	–	A12	C1
Ia-137	S3	Me	–	OMe	–	A13	C1
Ia-138	S3	Me	–	OMe	–	A14	C1
Ia-139	S3	Me	–	OMe	–	A15	C1

Table 60

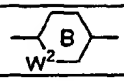
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-140	S3	Me	–	OMe	–	A16	C1
Ia-141	S3	Me	–	OMe	–	A17	C1
Ia-142	S3	Me	–	OMe	–	A18	C1
Ia-143	S3	Me	–	OMe	–	A19	C1
Ia-144	S3	Me	–	OMe	–	A20	C1
Ia-145	S3	Me	–	OMe	–	A21	C1
Ia-146	S3	Me	–	OMe	–	A22	C1
Ia-147	S3	Me	–	OMe	–	A23	C1
Ia-148	S3	Me	–	OMe	–	A24	C1
Ia-149	S3	Me	–	OMe	–	A25	C1
Ia-150	S3	Me	–	OMe	–	A26	C1
Ia-151	S3	Me	–	OMe	–	A27	C1
Ia-152	S3	Me	–	OMe	–	A28	C1
Ia-153	S3	Me	–	OMe	–	A29	C1
Ia-154	S3	Me	–	OMe	–	A30	C1
Ia-155	S3	Me	–	OMe	–	A31	C1
Ia-156	S3	Me	–	OMe	–	A32	C1
Ia-157	S3	Me	–	OMe	–	A33	C1
Ia-158	S3	Me	–	OMe	–	A35	C1
Ia-159	S3	Me	–	OMe	–	A39	C1
Ia-160	S3	Me	–	OMe	–	A40	C1
Ia-161	S3	Me	–	OMe	–	A6	C2
Ia-162	S3	Me	–	OMe	–	A8	C2
Ia-163	S3	Me	–	OMe	–	A32	C2
Ia-164	S3	Me	–	OMe	–	A33	C2
Ia-165	S3	Me	–	OMe	–	A35	C2
Ia-166	S3	Me	–	OMe	–	A37	C2
Ia-167	S3	Me	–	OMe	–	A8	C3
Ia-168	S3	Me	–	OMe	–	A33	C3
Ia-169	S3	Me	–	OMe	–	A32	C4
Ia-170	S3	Me	–	OMe	–	A35	C4
Ia-171	S3	Me	–	OMe	–	A32	C6
Ia-172	S3	Me	–	OMe	–	A35	C6
Ia-173	S3	Me	–	OMe	–	A8	C7
Ia-174	S3	Me	–	OMe	–	A32	C7
Ia-175	S3	Me	–	OMe	–	A8	C8
Ia-176	S3	Me	–	OMe	–	A8	C9
Ia-177	S3	Me	–	OMe	–	A32	C9
Ia-178	S3	Me	–	OMe	–	A33	C9

Table 61

No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-179	S3	Me	–	OMe	–	A8	C10
Ia-180	S3	Me	–	OMe	–	A32	C10
Ia-181	S3	Me	–	OMe	–	A33	C10
Ia-182	S3	Me	–	OMe	–	A6	C11
Ia-183	S3	Me	–	OMe	–	A8	C11
Ia-184	S3	Me	–	OMe	–	A8	C12
Ia-185	S3	Me	–	OMe	–	A8	C13
Ia-186	S3	Me	–	OMe	–	A8	C14
Ia-187	S3	Me	–	OMe	–	A32	C14
Ia-188	S3	Me	–	OMe	–	A8	C15
Ia-189	S3	Me	–	OMe	–	A32	C15
Ia-190	S3	Me	–	OMe	–	A33	C15
Ia-191	S3	Me	–	OMe	–	A6	C21
Ia-192	S3	Me	–	OMe	–	A8	C21
Ia-193	S3	Me	–	OMe	–	A6	C22
Ia-194	S3	Me	–	OMe	–	A8	C23
Ia-195	S3	Me	–	OMe	–	A32	C23
Ia-196	S3	Me	–	OMe	–	A33	C23
Ia-197	S3	Me	–	OMe	–	A8	C24
Ia-198	S3	Me	–	OEt	–	A6	C1
Ia-199	S3	Me	–	OEt	–	A8	C1
Ia-200	S3	Me	–	OEt	–	A14	C1
Ia-201	S3	Me	–	OEt	–	A17	C1
Ia-202	S3	Me	–	OEt	–	A32	C1
Ia-203	S3	Me	–	OEt	–	A33	C1
Ia-204	S3	Me	–	OEt	–	A6	C2
Ia-205	S3	Me	–	OEt	–	A32	C2
Ia-206	S3	Me	–	O^{i}Pr	–	A6	C1
Ia-207	S3	Me	–	O^{i}Pr	–	A8	C1
Ia-208	S3	Me	–	O^{i}Pr	–	A14	C1
Ia-209	S3	Me	–	O^{i}Pr	–	A17	C1
Ia-210	S3	Me	–	O^{i}Pr	–	A32	C1
Ia-211	S3	Me	–	O^{i}Pr	–	A33	C1
Ia-212	S3	Me	–	O^{i}Pr	–	A6	C2
Ia-213	S3	Me	–	O^{i}Pr	–	A32	C2
Ia-214	S3	Et	–	OMe	–	A6	C1
Ia-215	S3	Et	–	OMe	–	A8	C1
Ia-216	S3	Et	–	OMe	–	A14	C1
Ia-217	S3	Et	–	OMe	–	A17	C1

Table 62

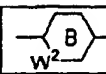
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-218	S3	Et	–	OMe	–	A32	C1
Ia-219	S3	Et	–	OMe	–	A33	C1
Ia-220	S3	Et	–	OMe	–	A6	C2
Ia-221	S3	Et	–	OMe	–	A32	C2
Ia-222	S3	H	–	CO_2H	–	A6	C1
Ia-223	S3	H	–	CO_2H	–	A8	C1
Ia-224	S3	H	–	CO_2H	–	A32	C1
Ia-225	S3	H	–	CO_2H	–	A33	C1
Ia-226	S3	H	–	CO_2Me	–	A6	C1
Ia-227	S3	H	–	CO_2Me	–	A8	C1
Ia-228	S3	H	–	CO_2Me	–	A11	C1
Ia-229	S3	H	–	CO_2Me	–	A32	C1
Ia-230	S3	H	–	CO_2Me	–	A33	C1
Ia-231	S3	H	–	CH_2OH	–	A32	C1
Ia-232	S3	H	–	CH_2OAc	–	A8	C1
Ia-233	S3	Me	–	SMe	–	A8	C1
Ia-234	S3	Me	–	SMe	–	A32	C1
Ia-235	S3	Me	–	NHMe	–	A6	C1
Ia-236	S3	Me	–	NHMe	–	A8	C1
Ia-237	S3	Me	–	NHMe	–	A32	C1
Ia-238	S4	–	Me	–	OMe	A32	C2
Ia-239	S4	–	Me	–	OMe	A6	C3
Ia-240	S4	–	Me	–	OMe	A8	C3
Ia-241	S4	–	Me	–	OMe	A33	C3
Ia-242	S4	–	Me	–	OMe	A35	C6
Ia-243	S4	–	Me	–	Me	A32	C2
Ia-244	S4	–	Me	–	Me	A6	C3
Ia-245	S4	–	Me	–	Me	A8	C3
Ia-246	S4	–	Me	–	Me	A33	C3
Ia-247	S4	–	Me	–	Me	A35	C6
Ia-248	S5	H	H	–	–	A6	C1
Ia-249	S5	H	H	–	–	A8	C1
Ia-250	S5	H	H	–	–	A32	C1
Ia-251	S5	H	H	–	–	A33	C1
Ia-252	S5	H	H	–	–	A32	C2
Ia-253	S5	H	H	–	–	A8	C3
Ia-254	S5	H	H	–	–	A33	C3
Ia-255	S5	H	H	–	–	A6	C4
Ia-256	S5	H	H	–	–	A8	C4
Ia-257	S5	H	H	–	–	A32	C4

Table 63

No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-258	S5	H	H	–	–	A33	C4
Ia-259	S5	H	H	–	–	A35	C6
Ia-260	S5	Me	Me	–	–	A32	C2
Ia-261	S5	Me	Me	–	–	A35	C2
Ia-262	S5	Me	Me	–	–	A35	C6
Ia-263	S6	H	–	–	H	A32	C2
Ia-264	S6	H	–	–	H	A35	C2
Ia-265	S6	H	–	–	H	A35	C6
Ia-266	S6	Me	–	–	Me	A32	C2
Ia-267	S6	Me	–	–	Me	A35	C2
Ia-268	S6	Me	–	–	Me	A35	C6
Ia-269	S7	H	H	–	–	A6	C2
Ia-270	S7	H	H	–	–	A8	C2
Ia-271	S7	H	H	–	–	A32	C2
Ia-272	S7	H	H	–	–	A8	C3
Ia-273	S7	H	H	–	–	A33	C3
Ia-274	S7	H	H	–	–	A35	C6
Ia-275	S7	H	H	–	–	A6	C16
Ia-276	S7	Me	H	–	–	A8	C2
Ia-277	S7	Me	H	–	–	A32	C2
Ia-278	S7	Me	H	–	–	A8	C3
Ia-279	S7	Me	H	–	–	A33	C3
Ia-280	S7	H	Me	–	–	A8	C2
Ia-281	S7	H	Me	–	–	A32	C2
Ia-282	S7	H	Me	–	–	A8	C3
Ia-283	S7	H	Me	–	–	A33	C3
Ia-284	S7	Me	Me	–	–	A8	C2
Ia-285	S7	Me	Me	–	–	A32	C2
Ia-286	S7	Me	Me	–	–	A8	C3
Ia-287	S7	Me	Me	–	–	A33	C3
Ia-288	S7	Me	Me	–	–	A35	C6
Ia-289	S8	H	H	–	–	A32	C2
Ia-290	S8	H	H	–	–	A35	C2
Ia-291	S8	H	H	–	–	A35	C6
Ia-292	S8	Me	H	–	–	A32	C2
Ia-293	S8	Me	H	–	–	A35	C2
Ia-294	S8	Me	H	–	–	A35	C6
Ia-295	S8	H	Me	–	–	A32	C2
Ia-296	S8	H	Me	–	–	A35	C2
Ia-297	S8	H	Me	–	–	A35	C6

Table 64

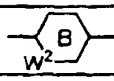
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-298	S8	Me	Me	–	–	A32	C2
Ia-299	S8	Me	Me	–	–	A35	C2
Ia-300	S8	Me	Me	–	–	A35	C6
Ia-301	S9	Me	Me	–	–	A6	C1
Ia-302	S9	Me	Me	–	–	A8	C1
Ia-303	S9	Me	Me	–	–	A32	C1
Ia-304	S9	Me	Me	–	–	A33	C1
Ia-305	S9	Me	Me	–	–	A6	C4
Ia-306	S9	Me	Me	–	–	A8	C4
Ia-307	S9	Me	Me	–	–	A32	C4
Ia-308	S9	Me	Me	–	–	A33	C4
Ia-309	S9	Me	OMe	–	–	A6	C1
Ia-310	S9	Me	OMe	–	–	A8	C1
Ia-311	S9	Me	OMe	–	–	A14	C1
Ia-312	S9	Me	OMe	–	–	A17	C1
Ia-313	S9	Me	OMe	–	–	A32	C1
Ia-314	S9	Me	OMe	–	–	A33	C1
Ia-315	S9	Me	OMe	–	–	A6	C4
Ia-316	S9	Me	OMe	–	–	A8	C4
Ia-317	S9	Me	OMe	–	–	A14	C4
Ia-318	S9	Me	OMe	–	–	A17	C4
Ia-319	S9	Me	OMe	–	–	A32	C4
Ia-320	S9	Me	OMe	–	–	A33	C4
Ia-321	S9	Me	OMe	–	–	A35	C4
Ia-322	S9	Me	CO_2H	–	–	A33	C4
Ia-323	S9	Me	CO_2Et	–	–	A6	C4
Ia-324	S9	Me	CO_2Et	–	–	A8	C4
Ia-325	S9	Me	CO_2Et	–	–	A32	C4
Ia-326	S9	Me	CO_2Et	–	–	A33	C4
Ia-327	S9	Me	CO_2Et	–	–	A35	C4
Ia-328	S9	Me	CH_2OH	–	–	A32	C4
Ia-329	S9	Me	CH_2OH	–	–	A35	C4
Ia-330	S10	H	–	–	–	A6	C1
Ia-331	S10	H	–	–	–	A8	C1
Ia-332	S10	H	–	–	–	A32	C1
Ia-333	S10	H	–	–	–	A33	C1
Ia-334	S10	Me	–	–	–	A6	C1
Ia-335	S10	Me	–	–	–	A8	C1
Ia-336	S10	Me	–	–	–	A32	C1

Table 65

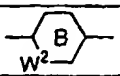
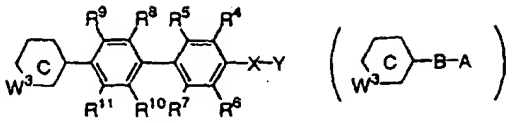
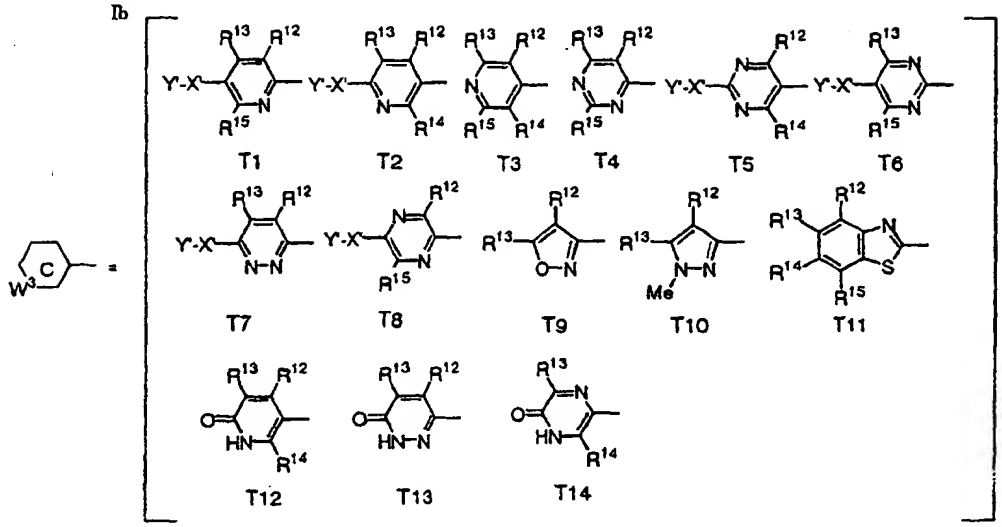
No.		R^8	R^9	R^{10}	R^{11}	A	C
Ia-337	S10	Me	–	–	–	A33	C1
Ia-338	S11	H	–	–	–	A6	C1
Ia-339	S11	H	–	–	–	A8	C1
Ia-340	S11	H	–	–	–	A14	C1
Ia-341	S11	H	–	–	–	A17	C1
Ia-342	S11	H	–	–	–	A32	C1
Ia-343	S11	H	–	–	–	A33	C1
Ia-344	S11	Me	–	–	–	A6	C1
Ia-345	S11	Me	–	–	–	A8	C1
Ia-346	S11	Me	–	–	–	A32	C1
Ia-347	S11	Me	–	–	–	A33	C1
Ia-348	S12	H	–	–	–	A6	C1
Ia-349	S12	H	–	–	–	A8	C1
Ia-350	S12	H	–	–	–	A32	C1
Ia-351	S12	H	–	–	–	A33	C1
Ia-352	S12	Me	–	–	–	A6	C1
Ia-353	S12	Me	–	–	–	A8	C1
Ia-354	S12	Me	–	–	–	A32	C1
Ia-355	S12	Me	–	–	–	A33	C1
Ia-356	S2	Me	H	-	Me	A37	C30
Ia-357	S1	H	Me	Me	-	A37	C30

Table 66



Ib



No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-1	T1	H	H	–	H	H	B2	A6
Ib-2	T1	H	H	–	H	H	B3	A8
Ib-3	T1	H	H	–	H	H	B2	A32
Ib-4	T1	H	H	–	H	H	B3	A33
Ib-5	T1	H	H	–	H	H	B2	A35
Ib-6	T1	H	H	–	H	H	B4	A11
Ib-7	T1	H	H	–	H	H	B4	A32
Ib-8	T1	H	H	–	H	H	B4	A35
Ib-9	T1	H	H	–	H	H	B4	A1
Ib-10	T1	H	H	–	H	H	B4	A41
Ib-11	T1	H	H	–	H	$N(COCF_3)CH_2CH=CMe_2$	B3	A33
Ib-12	T1	H	H	–	H	NH_2	B3	A8
Ib-13	T1	H	H	–	H	NH_2	B4	A35
Ib-14	T1	H	H	–	H	NH_2	B4	A1
Ib-15	T1	H	H	–	H	NH_2	B4	A41
Ib-16	T1	H	H	–	H	$NHCH_2CH=CMe_2$	B2	A32
Ib-17	T1	H	H	–	H	$NHCH_2CH=CMe_2$	B4	A35
Ib-18	T1	H	H	–	H	$NHCH_2CH=CMe_2$	B1	A41
Ib-19	T1	H	H	–	H	$NHCH_2CH=CMe_2$	B4	A1
Ib-20	T1	H	H	–	H	$NHCH_2CH=CMe_2$	B4	A41

Table 67

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-21	T1	H	H	–	H	$NHCOCF_3$	B3	A8
Ib-22	T1	H	H	–	H	$NHCOCF_3$	B3	A33
Ib-23	T1	H	H	–	H	$NHCOCF_3$	B4	A35
Ib-24	T1	H	H	–	H	$NHCOCF_3$	B4	A1
Ib-25	T1	H	H	–	H	$NHCOCF_3$	B4	A41
Ib-26	T1	H	H	–	H	NHCOMe	B2	A32
Ib-27	T1	H	H	–	H	NHCOMe	B3	A33
Ib-28	T1	H	H	–	H	NHCOMe	B4	A35
Ib-29	T1	H	H	–	H	NHCOMe	B4	A1
Ib-30	T1	H	H	–	H	NHCOMe	B4	A41
Ib-31	T1	H	H	–	H	$NHSO_2Et$	B1	A41
Ib-32	T1	H	H	–	H	$NHSO_2Et$	B4	A1
Ib-33	T1	H	H	–	H	$NHSO_2Et$	B4	A41
Ib-34	T1	H	H	–	H	NHMs	B2	A32
Ib-35	T1	H	H	–	H	NHMs	B1	A41
Ib-36	T1	H	H	–	H	NHMs	B4	A1
Ib-37	T1	H	H	–	H	NHMs	B4	A41
Ib-38	T1	H	H	–	H	NMe_2	B2	A6
Ib-39	T1	H	H	–	H	NMe_2	B3	A8
Ib-40	T1	H	H	–	H	NMe_2	B2	A32
Ib-41	T1	H	H	–	H	NMe_2	B3	A33
Ib-42	T1	H	H	–	H	NMe_2	B2	A35
Ib-43	T1	H	H	–	H	NMe_2	B4	A32
Ib-44	T1	H	H	–	H	NMe_2	B4	A35
Ib-45	T1	H	H	–	H	NMe_2	B5	A32
Ib-46	T1	H	H	–	H	NO_2	B2	A6
Ib-47	T1	H	H	–	H	NO_2	B3	A8
Ib-48	T1	H	H	–	H	NO_2	B4	A1
Ib-49	T1	H	H	–	H	NO_2	B4	A41
Ib-50	T2	H	H	H	–	Cl	B4	A1
Ib-51	T2	H	H	H	–	Cl	B4	A41
Ib-52	T2	H	H	H	–	H	B2	A6
Ib-53	T2	H	H	H	–	H	B3	A8
Ib-54	T2	H	H	H	–	H	B2	A32
Ib-55	T2	H	H	H	–	H	B3	A33
Ib-56	T2	H	H	H	–	H	B2	A35
Ib-57	T2	H	H	H	–	H	B4	A32
Ib-58	T2	H	H	H	–	H	B4	A35
Ib-59	T2	H	H	H	–	H	B4	A1
Ib-60	T2	H	H	H	–	H	B4	A41

Table 68

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-61	T2	H	H	H	–	NH_2	B2	A6
Ib-62	T2	H	H	H	–	NH_2	B3	A8
Ib-63	T2	H	H	H	–	NH_2	B1	A41
Ib-64	T2	H	H	H	–	NH_2	B4	A1
Ib-65	T2	H	H	H	–	NH_2	B4	A41
Ib-66	T2	H	H	Me	–	NH_2	B4	A1
Ib-67	T2	H	H	Me	–	NH_2	B4	A41
Ib-68	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A1
Ib-69	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A41
Ib-70	T2	H	H	Me	–	$NHCH_2CH=CMe_2$	B4	A1
Ib-71	T2	H	H	Me	–	$NHCH_2CH=CMe_2$	B4	A41
Ib-72	T2	H	H	H	–	NHCOMe	B4	A1
Ib-73	T2	H	H	H	–	NHCOMe	B4	A41
Ib-74	T2	H	H	Me	–	NHCOMe	B4	A1
Ib-75	T2	H	H	Me	–	NHCOMe	B4	A41
Ib-76	T2	H	H	H	–	NHMs	B4	A1
Ib-77	T2	H	H	H	–	NHMs	B4	A41
Ib-78	T2	H	H	Me	–	NHMs	B4	A1
Ib-79	T2	H	H	Me	–	NHMs	B4	A41
Ib-80	T2	H	H	H	–	NMe_2	B2	A6
Ib-81	T2	H	H	H	–	NMe_2	B3	A8
Ib-82	T2	H	H	H	–	NMe_2	B2	A32
Ib-83	T2	H	H	H	–	NMe_2	B3	A33
Ib-84	T2	H	H	H	–	NMe_2	B4	A32
Ib-85	T2	H	H	H	–	NMe_2	B4	A35
Ib-86	T2	H	H	H	–	$OCH_2C_6H_5$	B4	A1
Ib-87	T2	H	H	H	–	$OCH_2C_6H_5$	B4	A41
Ib-88	T2	H	H	H	–	$OCH_2CH=CMe_2$	B1	A41
Ib-89	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A1
Ib-90	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A41
Ib-91	T2	H	H	H	–	OMe	B2	A6
Ib-92	T2	H	H	H	–	OMe	B3	A8
Ib-93	T2	H	H	H	–	OMe	B2	A32
Ib-94	T2	H	H	H	–	OMe	B3	A33
Ib-95	T2	H	H	H	–	OMe	B2	A35
Ib-96	T2	H	H	H	–	OMe	B4	A32
Ib-97	T2	H	H	H	–	OMe	B4	A35
Ib-98	T2	H	H	H	–	Ms	B4	A1
Ib-99	T2	H	H	H	–	Ms	B4	A41
Ib-100	T3	H	H	H	H	–	B2	A6

Table 69

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-101	T3	H	H	H	H	–	B2	A32
Ib-102	T3	H	H	H	H	–	B2	A35
Ib-103	T3	H	H	H	H	–	B3	A8
Ib-104	T3	H	H	H	H	–	B3	A33
Ib-105	T3	H	H	H	H	–	B4	A11
Ib-106	T3	H	H	H	H	–	B4	A32
Ib-107	T3	H	H	H	H	–	B4	A35
Ib-108	T3	H	H	H	H	–	B4	A37
Ib-109	T3	H	H	H	H	–	B4	A38
Ib-110	T3	H	H	H	H	–	B4	A1
Ib-111	T3	H	H	H	H	–	B4	A41
Ib-112	T4	H	H	–	H	–	B3	A8
Ib-113	T4	H	H	–	H	–	B2	A32
Ib-114	T4	H	H	–	H	–	B3	A33
Ib-115	T4	H	H	–	OMe	–	B4	A1
Ib-116	T4	H	H	–	OMe	–	B4	A41
Ib-117	T4	H	Cl	–	H	–	B2	A6
Ib-118	T4	H	Cl	–	H	–	B3	A8
Ib-119	T4	H	Cl	–	H	–	B3	A33
Ib-120	T4	H	Cl	–	H	–	B4	A1
Ib-121	T4	H	Cl	–	H	–	B4	A41
Ib-122	T4	H	OH	–	H	–	B4	A1
Ib-123	T4	H	OH	–	H	–	B4	A41
Ib-124	T4	H	OMe	–	H	–	B2	A32
Ib-125	T4	H	OMe	–	H	–	B4	A35
Ib-126	T4	H	OMe	–	H	–	B4	A1
Ib-127	T4	H	OMe	–	H	–	B4	A41
Ib-128	T5	H	–	H	–	H	B2	A32
Ib-129	T5	H	–	H	–	H	B3	A33
Ib-130	T5	H	–	H	–	H	B4	A35
Ib-131	T5	H	–	H	–	OH	B4	A35
Ib-132	T5	H	–	H	–	$OCH_2C_6H_5$	B4	A1
Ib-133	T5	H	–	H	–	$OCH_2C_6H_5$	B4	A41
Ib-134	T5	H	–	H	–	$OCH_2CH=CMe_2$	B4	A1
Ib-135	T5	H	–	H	–	$OCH_2CH=CMe_2$	B4	A41
Ib-136	T5	H	–	H	–	NMe_2	B2	A32
Ib-137	T5	H	–	H	–	NMe_2	B4	A35
Ib-138	T5	H	–	H	–	$NHCH_2CH=CMe_2$	B4	A1
Ib-139	T5	H	–	H	–	$NHCH_2CH=CMe_2$	B4	A41
Ib-140	T6	–	H	–	H	H	B2	A32

Table 70

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-141	T6	–	H	–	H	H	B4	A35
Ib-142	T7	H	H	–	–	H	B2	A32
Ib-143	T7	H	H	–	–	H	B3	A33
Ib-144	T7	H	H	–	–	Cl	B2	A6
Ib-145	T7	H	H	–	–	Cl	B3	A8
Ib-146	T7	H	H	–	–	Cl	B2	A32
Ib-147	T7	H	H	–	–	Cl	B3	A33
Ib-148	T7	H	H	–	–	Cl	B4	A35
Ib-149	T7	H	H	–	–	Cl	B4	A1
Ib-150	T7	H	H	–	–	Cl	B4	A41
Ib-151	T7	H	H	–	–	$NHCH_2CH=CMe_2$	B4	A1
Ib-152	T7	H	H	–	–	$NHCH_2CH=CMe_2$	B4	A41
Ib-153	T7	H	H	–	–	NMe_2	B2	A6
Ib-154	T7	H	H	–	–	NMe_2	B3	A8
Ib-155	T7	H	H	–	–	NMe_2	B2	A32
Ib-156	T7	H	H	–	–	NMe_2	B3	A33
Ib-157	T7	H	H	–	–	NMe_2	B4	A35
Ib-158	T7	H	H	–	–	$OCH_2C_6H_5$	B4	A1
Ib-159	T7	H	H	–	–	$OCH_2C_6H_5$	B4	A41
Ib-160	T7	H	H	–	–	$OCH_2CH=CMe_2$	B4	A1
Ib-161	T7	H	H	–	–	$OCH_2CH=CMe_2$	B4	A41
Ib-162	T7	H	H	–	–	OMe	B2	A32
Ib-163	T7	H	H	–	–	OMe	B4	A35
Ib-164	T7	H	H	–	–	OMe	B4	A1
Ib-165	T7	H	H	–	–	OMe	B4	A41
Ib-166	T8	H	–	–	H	H	B2	A6
Ib-167	T8	H	–	–	H	H	B3	A8
Ib-168	T8	H	–	–	H	H	B2	A32
Ib-169	T8	H	–	–	H	H	B3	A33
Ib-170	T8	H	–	–	H	H	B4	A35
Ib-171	T8	H	–	–	H	OMe	B2	A32
Ib-172	T8	H	–	–	H	OMe	B4	A35
Ib-173	T8	H	–	–	H	NMe_2	B2	A32
Ib-174	T8	H	–	–	H	NMe_2	B4	A35
Ib-175	T8	H	–	–	H	Cl	B4	A1
Ib-176	T8	H	–	–	H	Cl	B4	A41
Ib-177	T8	H	–	–	H	$OCH_2C_6H_5$	B4	A1
Ib-178	T8	H	–	–	H	$OCH_2C_6H_5$	B4	A41
Ib-179	T8	H	–	–	H	$OCH_2CH=CMe_2$	B4	A1
Ib-180	T8	H	–	–	H	$OCH_2CH=CMe_2$	B4	A41

Table 71

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-181	T8	H	–	–	H	$NHCH_2CH=CMe_2$	B4	A1
Ib-182	T8	H	–	–	H	$NHCH_2CH=CMe_2$	B4	A41
Ib-183	T9	H	$OCH_2C_6H_5$	–	–	–	B4	A1
Ib-184	T9	H	$OCH_2C_6H_5$	–	–	–	B4	A41
Ib-185	T9	H	$OCH_2CH=CMe_2$	–	–	–	B4	A1
Ib-186	T9	H	$OCH_2CH=CMe_2$	–	–	–	B4	A41
Ib-187	T9	H	NH_2	–	–	–	B4	A1
Ib-188	T9	H	NH_2	–	–	–	B4	A41
Ib-189	T9	H	$NHCH_2CH=CMe_2$	–	–	–	B4	A1
Ib-190	T9	H	$NHCH_2CH=CMe_2$	–	–	–	B4	A41
Ib-191	T9	H	NHMs	–	–	–	B4	A1
Ib-192	T9	H	NHMs	–	–	–	B4	A41
Ib-193	T10	H	$OCH_2C_6H_5$	–	–	–	B4	A1
Ib-194	T10	H	$OCH_2C_6H_5$	–	–	–	B4	A41
Ib-195	T10	H	$OCH_2CH=CMe_2$	–	–	–	B4	A1
Ib-196	T10	H	$OCH_2CH=CMe_2$	–	–	–	B4	A41
Ib-197	T10	H	NH_2	–	–	–	B4	A1
Ib-198	T10	H	NH_2	–	–	–	B4	A41
Ib-199	T10	H	$NHCH_2CH=CMe_2$	–	–	–	B4	A1
Ib-200	T10	H	$NHCH_2CH=CMe_2$	–	–	–	B4	A41
Ib-201	T10	H	NHMs	–	–	–	B4	A1
Ib-202	T10	H	NHMs	–	–	–	B4	A41
Ib-203	T11	H	H	H	H	–	B2	A6
Ib-204	T11	H	H	H	H	–	B3	A8
Ib-205	T11	H	H	H	H	–	B2	A32
Ib-206	T11	H	H	H	H	–	B3	A33
Ib-207	T1	H	H	-	H	$NHCH_2CH=CMe_2$	B4	A37
Ib-208	T1	H	H	-	H	NH_2	B4	A37
Ib-209	T1	H	H	-	H	NO_2	B4	A37
Ib-210	T1	H	H	-	H	H	B4	A5
Ib-211	T1	H	H	-	H	H	B4	A37
Ib-212	T1	H	H	-	H	NH-cHex	B4	A37
Ib-213	T1	H	H	-	H	OMe	B4	A37
Ib-214	T1	H	H	-	H	$OCH_2CH=CMe_2$	B4	A37
Ib-215	T1	H	H	-	H	NH_2	B7	A37
Ib-216	T1	H	H	-	H	$NHCH_2CH=CMe_2$	B7	A37
Ib-217	T1	H	H	-	H	OH	B7	A37

Table 72

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-218	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A64
Ib-219	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A65
Ib-220	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A75
Ib-221	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A76
Ib-222	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A67
Ib-223	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A77
Ib-224	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A64
Ib-225	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A65
Ib-226	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A69
Ib-227	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A76
Ib-228	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A83
Ib-229	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A82
Ib-230	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A81
Ib-231	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A69
Ib-232	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A68
Ib-233	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A66
Ib-234	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A71
Ib-235	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A72
Ib-236	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A73
Ib-237	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A74
Ib-238	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A104
Ib-239	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A45
Ib-240	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A47
Ib-241	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A49
Ib-242	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A48
Ib-243	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A53
Ib-244	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A50
Ib-245	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A59
Ib-246	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A57
Ib-247	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A55
Ib-248	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A42
Ib-249	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A43
Ib-250	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A67
Ib-251	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A62
Ib-252	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A63

Table 73

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-253	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A78
Ib-254	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A79
Ib-255	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A84
Ib-256	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A85
Ib-257	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A60
Ib-258	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A61
Ib-259	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A46
Ib-260	T2	H	NO_2	H	-	$OCH_2CH=CMe_2$	B4	A46
Ib-261	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A107
Ib-262	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A37
Ib-263	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A108
Ib-264	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A109
Ib-265	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A110
Ib-266	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A113
Ib-267	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A114
Ib-268	T2	H	H	Me	-	$OCH_2CH=CMe_2$	B4	A67
Ib-269	T2	H	Me	H	-	$OCH_2CH=CMe_2$	B4	A67
Ib-270	T2	Me	H	H	-	$OCH_2CH=CMe_2$	B4	A67
Ib-271	T2	H	Me	H	-	$OCH_2CH=CMe_2$	B4	A64
Ib-272	T2	Me	H	H	-	$OCH_2CH=CMe_2$	B4	A64
Ib-273	T2	H	H	Me	-	$OCH_2CH=CMe_2$	B4	A46
Ib-274	T2	H	Me	H	-	$OCH_2CH=CMe_2$	B4	A46
Ib-275	T2	Me	H	H	-	$OCH_2CH=CMe_2$	B4	A46
Ib-276	T2	H	H	Me	-	$OCH_2CH=CMe_2$	B4	A42
Ib-277	T2	H	Me	H	-	$OCH_2CH=CMe_2$	B4	A42
Ib-278	T2	Me	H	H	-	$OCH_2CH=CMe_2$	B4	A42
Ib-279	T2	H	H	H	-	OCH_2CH_2F	B4	A46
Ib-280	T2	H	H	H	-	$OCH_2C\equiv CH$	B4	A47
Ib-281	T2	H	H	H	-	$OCH_2CH=CH_2$	B4	A45
Ib-282	T2	H	H	H	-	$CH_2CH_2CH=CMe_2$	B4	A67
Ib-283	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B4	A37
Ib-284	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B4	A5
Ib-285	T2	H	H	H	-	NH_2	B4	A37
Ib-286	T2	H	H	H	-	NH_2	B4	A5
Ib-287	T2	H	H	H	-	NH-cHex	B4	A5
Ib-288	T2	H	H	H	-	OCH_2-2-furyl	B4	A67

Table 74

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-289	T2	H	H	H	-	CH2C≡CMe	B4	A67
Ib-290	T2	H	H	H	-	1-pyrrolyl	B4	A67
Ib-291	T2	H	H	H	-	1-pyrrolidinyl	B4	A67
Ib-292	T2	H	H	H	-	H	B4	A5
Ib-293	T2	H	H	H	-	OMe	B4	A46
Ib-294	T2	H	NO_2	H	-	OMe	B4	A46
Ib-295	T2	H	H	H	-	OBn	B4	A37
Ib-296	T2	H	H	H	-	OMe	B4	A37
Ib-297	T2	H	H	H	-	$OCH_2CH=CMe_2$	B7	A42
Ib-298	T2	H	H	H	-	$OCH_2CH=CMe_2$	B7	A46
Ib-299	T2	H	H	H	-	$OCH_2CH=CMe_2$	B7	A44
Ib-300	T2	H	H	H	-	OMe	B7	A37
Ib-301	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B7	A37
Ib-302	T2	H	H	H	-	NH-i-Pr	B7	A37
Ib-303	T2	H	H	H	-	$NHCH_2$-cHex	B7	A37
Ib-304	T2	H	H	H	-	$NHCH_2$-3-Pyr	B7	A37
Ib-305	T2	H	H	H	-	NH-i-Pent	B7	A37
Ib-306	T2	H	H	H	-	NH-i-Bu	B7	A37
Ib-307	T2	H	H	H	-	$NHCH_2$-2-thienyl	B7	A37
Ib-308	T2	H	H	H	-	$NHCH_2$-3-thienyl	B7	A37
Ib-309	T2	H	H	H	-	$NHCH_2$-2-furyl	B7	A37
Ib-310	T2	H	H	H	-	$NHCH_2$-3-furyl	B7	A37
Ib-311	T2	H	H	H	-	$NHCH_2$-2-Py	B7	A37
Ib-312	T2	H	H	H	-	NH_2	B7	A37
Ib-313	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B7	A42
Ib-314	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B7	A46
Ib-315	T2	H	H	H	-	$SCH_2CH=CMe_2$	B7	A42
Ib-316	T2	H	H	H	-	$SCH_2CH=CMe_2$	B7	A46
Ib-317	T2	H	H	H	-	$SCH_2CH=CMe_2$	B7	A111
Ib-318	T2	H	H	Me	-	$NHCH_2CH=CMe_2$	B7	A46
Ib-319	T2	H	Me	H	-	$NHCH_2CH=CMe_2$	B7	A46
Ib-320	T2	Me	H	H	-	$NHCH_2CH=CMe_2$	B7	A46
Ib-321	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B7	A112
Ib-322	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B8	A37

Table 75

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-323	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A42
Ib-324	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A46
Ib-325	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A51
Ib-326	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A52
Ib-327	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A89
Ib-328	T2	H	H	H	-	$OCH_2CH=CMe_2$	B8	A54
Ib-329	T2	H	H	H	-	OCH2CH=CMe2	B10	A42
Ib-330	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A46
Ib-331	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A44
Ib-332	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A48
Ib-333	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A54
Ib-334	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A117
Ib-335	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A50
Ib-336	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A115
Ib-337	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A116
Ib-338	T2	H	H	H	-	$OCH_2CH=CMe_2$	B10	A89
Ib-339	T2	H	H	H	-	$OCH_2CH=CHMe$	B10	A46
Ib-340	T2	H	H	H	-	$OCH_2CH_2CH=CH_2$	B10	A46
Ib-341	T2	H	H	H	-	$OCH_2CH=CHEt$	B10	A46
Ib-342	T2	H	H	H	-	$OCH_2C\equiv CMe$	B10	A46
Ib-343	T2	H	H	H	-	OCH_2-2-furyl	B10	A46
Ib-344	T2	H	H	H	-	OCH_2-2-furyl	B10	A42
Ib-345	T2	H	H	H	-	OCH_2CH_2F	B10	A46
Ib-346	T2	H	H	H	-	OCH_2CF_3	B10	A46
Ib-347	T2	H	H	H	-	OCH_2-2-furyl	B10	A117
Ib-348	T2	H	H	H	-	$OCH_2C\equiv CMe$	B10	A117
Ib-349	T2	H	H	H	-	SMe	B10	A46
Ib-350	T2	H	H	H	-	SO_2Me	B10	A46
Ib-351	T2	H	H	H	-	$OCH_2CH=CMe_2$	B12	A42
Ib-352	T2	H	H	H	-	$OCH_2CH=CMe_2$	B12	A46
Ib-353	T2	H	H	H	-	$OCH_2CH=CMe_2$	B12	A58
Ib-354	T2	H	H	H	-	$OCH_2CH=CMe_2$	B12	A48
Ib-355	T2	H	H	Me	-	$OCH_2CH=CMe_2$	B12	A46
Ib-356	T2	H	Me	H	-	$OCH_2CH=CMe_2$	B12	A46
Ib-357	T2	Me	H	H	-	$OCH_2CH=CMe_2$	B12	A46

Table 76

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-358	T2	H	H	H	-	SMe	B12	A46
Ib-359	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B12	A46
Ib-360	T2	H	H	H	-	NH2	B12	A78
Ib-361	T2	H	H	H	-	$NHCH_2CH=CMe_2$	B12	A78
Ib-362	T2	H	H	H	-	NH-cHex	B12	A37
Ib-363	T2	H	H	H	-	$OCH_2CH=CMe_2$	B13	A46
Ib-364	T2	H	H	H	-	$OCH_2CH=CMe_2$	B13	A50
Ib-365	T2	H	H	H	-	$OCH_2CH=CMe_2$	B17	A46
Ib-366	T2	H	H	H	-	$OCH_2CH=CMe_2$	B17	A44
Ib-367	T2	H	H	H	-	$OCH_2CH=CMe_2$	B17	A50
Ib-368	T2	H	H	H	-	$OCH_2CH=CMe_2$	B17	A94
Ib-369	T2	H	H	H	-	$OCH_2CH=CMe_2$	B17	A86
Ib-370	T2	H	H	H	-	OCH_2-2-furyl	B17	A46
Ib-371	T2	H	H	H	-	OCH_2-2-furyl	B17	A44
Ib-372	T2	H	H	H	-	OCH_2-2-furyl	B17	A94
Ib-373	T2	H	H	H	-	$OCH_2CH=CMe_2$	B23	A46
Ib-374	T2	H	H	H	-	OCH_2-2-furyl	B23	A46
Ib-375	T2	H	H	H	-	$OCH_2CH=CMe_2$	B28	A46
Ib-376	T2	H	H	H	-	$OCH_2CH=CMe_2$	B28	A50
Ib-377	T2	H	H	H	-	$OCH_2CH=CMe_2$	B29	A104
Ib-378	T2	H	H	H	-	$OCH_2CH=CMe_2$	B29	A105
Ib-379	T2	H	H	H	-	$OCH_2CH=CMe_2$	B29	A67
Ib-380	T2	H	H	H	-	$OCH_2CH=CMe_2$	B29	A106
Ib-381	T2	H	H	H	-	$OCH_2CH=CMe_2$	B30	A46
Ib-382	T2	H	H	H	-	OCH_2-2-furyl	B30	A46
Ib-383	T2	H	H	H	-	$OCH_2C\equiv CMe$	B30	A46
Ib-384	T4	H	Cl	-	H	-	B4	A37
Ib-385	T4	H	OMe	-	H	-	B4	A37
Ib-386	T4	H	NMe_2	-	H	-	B4	A37
Ib-387	T5	H	-	H	-	H	B4	A5
Ib-388	T5	H	-	H	-	H	B4	A37
Ib-389	T5	H	-	H	-	NH_2	B4	A5
Ib-390	T5	H	-	H	-	NH_2	B4	A37
Ib-391	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B4	A5
Ib-392	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B4	A37
Ib-393	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B4	A42
Ib-394	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B4	A46

Table 77

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-395	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B4	A118
Ib-396	T5	H	-	H	-	$OCH_2CH=CMe_2$	B4	A67
Ib-397	T5	H	-	H	-	$OCH_2CH=CMe_2$	B7	A46
Ib-398	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B7	A37
Ib-399	T5	H	-	H	-	NH_2	B7	A37
Ib-400	T5	H	-	H	-	$NHCH_2CH=CMe_2$	B12	A37
Ib-401	T6	-	H	-	H	H	B4	A5
Ib-402	T6	-	H	-	H	H	B4	A37
Ib-403	T7	H	H	-	-	$OCH_2CH=CMe_2$	B4	A46
Ib-404	T7	H	H	-	-	Cl	B4	A5
Ib-405	T7	H	H	-	-	OMe	B4	A5
Ib-406	T7	H	H	-	-	NMe_2	B4	A5
Ib-407	T7	H	H	-	-	Cl	B4	A37
Ib-408	T7	H	H	-	-	OMe	B4	A37
Ib-409	T7	H	H	-	-	NMe_2	B4	A37
Ib-410	T7	H	H	-	-	NH_2	B4	A5
Ib-411	T7	H	H	-	-	NH_2	B4	A37
Ib-412	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B4	A5
Ib-413	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B4	A37
Ib-414	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B4	A42
Ib-415	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B4	A46
Ib-416	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B4	A118
Ib-417	T7	H	H	-	-	NH_2	B7	A37
Ib-418	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B7	A37
Ib-419	T7	H	H	-	-	$OCH_2CH=CMe_2$	B7	A46
Ib-420	T7	H	H	-	-	$NHCH_2CH=CMe_2$	B12	A37
Ib-421	T8	H	-	-	H	H	B4	A5
Ib-422	T8	H	-	-	H	H	B4	A37
Ib-423	T8	H	-	-	H	NH_2	B4	A5
Ib-424	T8	H	-	-	H	NH_2	B4	A37
Ib-425	T8	H	-	-	H	NH-cHex	B4	A5
Ib-426	T8	H	-	-	H	NH-cHex	B4	A37
Ib-427	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B4	A5
Ib-428	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B4	A37
Ib-429	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B4	A46
Ib-430	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B4	A118
Ib-431	T8	H	-	-	H	$OCH_2CH=CMe_2$	B7	A46
Ib-432	T8	H	-	-	H	NH_2	B7	A37

Table 78

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-433	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B7	A37
Ib-434	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B7	A42
Ib-435	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B7	A46
Ib-436	T8	H	-	-	H	$NHCH_2CH=CMe_2$	B12	A37
Ib-437	T12	H	H	H	-	-	B4	A64
Ib-438	T12	H	H	H	-	-	B4	A80
Ib-439	T12	H	H	H	-	-	B4	A81
Ib-440	T12	H	H	H	-	-	B4	A67
Ib-441	T12	H	H	H	-	-	B7	A37
Ib-442	T13	H	H	-	-	-	B7	A37
Ib-443	T14	-	H	H	-	-	B7	A37
Ib-444	T2	H	H	H	-	$OCH_2CH=CMe_2$	B6	A46
Ib-445	T2	H	H	H	-	$OCH_2CH=CMe_2$	B11	A46
Ib-446	T2	H	H	H	-	$OCH_2CH=CMe_2$	B14	A46
Ib-447	T2	H	H	H	-	$OCH_2CH=CMe_2$	B15	A46
Ib-448	T2	H	H	H	-	$OCH_2CH=CMe_2$	B16	A46
Ib-449	T2	H	H	H	-	$OCH_2CH=CMe_2$	B18	A46
Ib-450	T2	H	H	H	-	$OCH_2CH=CMe_2$	B19	A46
Ib-451	T2	H	H	H	-	$OCH_2CH=CMe_2$	B20	A46
Ib-452	T2	H	H	H	-	$OCH_2CH=CMe_2$	B21	A46
Ib-453	T2	H	H	H	-	$OCH_2CH=CMe_2$	B22	A46
Ib-454	T2	H	H	H	-	$OCH_2CH=CMe_2$	B23	A46
Ib-455	T2	H	H	H	-	$OCH_2CH=CMe_2$	B24	A46
Ib-456	T2	H	H	H	-	$OCH_2CH=CMe_2$	B25	A46
Ib-457	T2	H	H	H	-	$OCH_2CH=CMe_2$	B26	A46
Ib-458	T2	H	H	H	-	$OCH_2CH=CMe_2$	B27	A46
Ib-459	T2	H	H	H	-	$OCH_2CH=CMe_2$	B28	A46
Ib-460	T2	H	H	H	-	$OCH_2CH=CMe_2$	B29	A46
Ib-461	T2	H	H	H	-	$OCH_2CH=CMe_2$	B30	A46
Ib-462	T2	H	H	H	-	$OCH_2CH=CMe_2$	B31	A46
Ib-463	T2	H	H	H	-	$OCH_2CH=CMe_2$	B32	A46
Ib-464	T2	H	H	H	-	$OCH_2CH=CMe_2$	B33	A46
Ib-465	T2	H	H	H	-	$OCH_2CH=CMe_2$	B34	A46
Ib-466	T2	H	H	H	-	$OCH_2CH=CMe_2$	B35	A46
Ib-467	T2	H	H	H	-	$OCH_2CH=CMe_2$	B36	A46
Ib-468	T2	H	H	H	-	$OCH_2CH=CMe_2$	B37	A46
Ib-469	T2	H	H	H	-	$OCH_2CH=CMe_2$	B38	A46

Table 79

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-470	T2	H	H	H	–	$OCH_2CH=CMe_2$	B39	A46
Ib-471	T2	H	H	H	–	$OCH_2CH=CMe_2$	B40	A46
Ib-472	T2	H	H	H	–	$OCH_2CH=CMe_2$	B41	A46
Ib-473	T2	H	H	H	–	$OCH_2CH=CMe_2$	B42	A46
Ib-474	T2	H	H	H	–	$OCH_2CH=CMe_2$	B43	A46
Ib-475	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A2
Ib-476	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A3
Ib-477	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A4
Ib-478	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A7
Ib-479	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A9
Ib-480	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A10
Ib-481	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A12
Ib-482	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A13
Ib-483	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A14
Ib-484	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A15
Ib-485	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A16
Ib-486	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A17
Ib-487	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A18
Ib-488	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A19
Ib-489	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A20
Ib-490	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A21
Ib-491	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A22
Ib-492	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A23
Ib-493	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A24
Ib-494	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A25
Ib-495	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A26
Ib-496	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A27
Ib-497	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A28
Ib-498	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A29
Ib-499	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A30
Ib-500	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A31
Ib-501	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A34
Ib-502	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A36
Ib-503	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A39
Ib-504	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A40
Ib-505	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A56
Ib-506	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A70
Ib-507	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A87
Ib-508	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A88
Ib-509	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A89

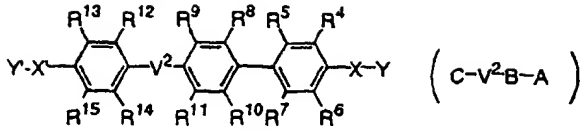
Table 80

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-510	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A90
Ib-511	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A91
Ib-512	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A92
Ib-513	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A93
Ib-514	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A94
Ib-515	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A95
Ib-516	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A96
Ib-517	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A97
Ib-518	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A98
Ib-519	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A99
Ib-520	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A100
Ib-521	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A101
Ib-522	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A102
Ib-523	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A103
Ib-524	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A104
Ib-525	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A105
Ib-526	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A106
Ib-527	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A107
Ib-528	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A108
Ib-529	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A109
Ib-530	T2	H	H	H	–	$NHCH_2CH=CMe_2$	B4	A110
Ib-531	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A111
Ib-532	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A112
Ib-533	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A113
Ib-534	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A114
Ib-535	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A115
Ib-536	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A116
Ib-537	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A117
Ib-538	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A118
Ib-539	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A119
Ib-540	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A120
Ib-541	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A121
Ib-542	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A122
Ib-543	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A123
Ib-544	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A124
Ib-545	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A125
Ib-546	T2	H	H	H	–	$OCH_2CH=CMe_2$	B4	A126

Table 81

No.		R^{12}	R^{13}	R^{14}	R^{15}	X'-Y'	B	A
Ib-547	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A127
Ib-548	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A120
Ib-549	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A122
Ib-550	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A124
Ib-551	T2	H	H	H	-	$OCH_2CH=CMe_2$	B1	A126
Ib-552	T2	H	H	H	-	OCH_2-2-furyl	B10	A128
Ib-553	T2	H	H	H	-	OCH_2-2-furyl	B10	A129
Ib-554	T2	H	H	H	-	OCH_2-2-furyl	B10	A130
Ib-555	T2	H	H	H	-	OCH_2-2-furyl	B10	A131
Ib-556	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH_2OCO(CH_2)_2COOH$	B12	A132
Ib-557	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH(Me)OCOMe$	B12	A133
Ib-558	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH_2OCO(CH_2)_{14}Me$	B12	A134
Ib-559	T2	H	H	H	-	$-N(CH_2CH=CMe_2)CH_2NHCO\text{-}C_6H_4\text{-}o\text{-}OCH_2OCOMe$	B12	A135
Ib-560	T5	H	-	H	-	$OCH_2CH=CMe_2$	B4	A121
Ib-561	T5	H	-	H	-	$OCH_2CH=CMe_2$	B4	A123
Ib-562	T5	H	-	H	-	$OCH_2CH=CMe_2$	B4	A125
Ib-563	T5	H	-	H	-	$OCH_2CH=CMe_2$	B4	A127
Ib-564	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A136
Ib-565	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A137
Ib-566	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A138
Ib-567	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A139
Ib-568	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A140
Ib-569	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A141
Ib-570	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A142
Ib-571	T2	H	H	H	-	$OCH_2CH=CMe_2$	B4	A143
Ib-572	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH_2OCOCH_2OH$	B12	A78
Ib-573	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH_2OCO(CH_2)_2COOH$	B12	A78
Ib-574	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH_2OCOMe$	B12	A78
Ib-575	T2	H	H	H	-	$-N(CH_2CH=CMe_2)COOCH(Me)OCOCMe_3$	B12	A78

Table 82



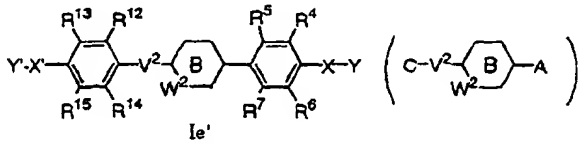
Ic'

No.	V^2	C	B	A
Ic-1	O	C2	B4	A32
Ic-2	O	C2	B4	A35
Ic-3	O	C3	B4	A6
Ic-4	O	C3	B4	A8
Ic-5	O	C3	B4	A11
Ic-6	O	C3	B4	A33
Ic-7	O	C3	B4	A35
Ic-8	O	C5	B4	A11
Ic-9	O	C5	B4	A35
Ic-10	O	C6	B1	A35
Ic-11	O	C6	B1	A37
Ic-12	O	C6	B4	A11
Ic-13	O	C6	B4	A32
Ic-14	O	C6	B4	A35
Ic-15	O	C19	B4	A35
Ic-16	O	C25	B4	A41
Ic-17	O	C26	B4	A41
Ic-18	O	C27	B4	A41
Ic-19	O	C28	B4	A41
Ic-20	O	C29	B4	A41
Ic-21	NH	C2	B4	A32
Ic-22	NH	C2	B4	A35
Ic-23	OCH_2	C2	B4	A32
Ic-24	OCH_2	C2	B4	A33

Table 83

No.	V^2	C	B	A
Ic-25	OCH_2	C2	B4	A35
Ic-26	OCH_2	C6	B4	A35
Ic-27	OCH_2	C19	B4	A35
Ic-28	CH_2O	C2	B1	A32
Ic-29	CH_2O	C2	B1	A35
Ic-30	CH_2O	C2	B4	A35
Ic-31	CH_2O	C3	B1	A33
Ic-32	CH_2O	C3	B4	A33
Ic-33	$NHCH_2$	C2	B4	A35
Ic-34	$NHCH_2$	C6	B4	A35
Ic-35	CH=CH	C2	B4	A32
Ic-36	CH=CH	C2	B4	A33
Ic-37	CH=CH	C2	B4	A35
Ic-38	CH=CH	C3	B4	A33
Ic-39	CH=CH	C6	B4	A32
Ic-40	CH=CH	C6	B4	A35
Ic-41	CH=CH	C19	B4	A35
Ic-42	C≡C	C2	B4	A32
Ic-43	C≡C	C2	B4	A35
Ic-44	C≡C	C3	B4	A35
Ic-45	C≡C	C19	B4	A35
Ic-46	CO	C2	B4	A32
Ic-47	CO	C2	B4	A35
Ic-48	CH(OH)	C2	B4	A32
Ic-49	CH(OH)	C2	B4	A35

Table 84



Ie'

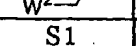
No.	V^2	C		R^8	R^9	R^{10}	A
Ie-1	O	C6	S1	H	H	H	A6
Ie-2	O	C6	S1	H	H	H	A8
Ie-3	O	C6	S1	H	H	H	A32
Ie-4	O	C9	S1	H	H	H	A6
Ie-5	O	C9	S1	H	H	H	A8
Ie-6	O	C9	S1	H	H	H	A14
Ie-7	O	C9	S1	H	H	H	A17
Ie-8	O	C9	S1	H	H	H	A32
Ie-9	O	C9	S1	H	H	H	A33
Ie-10	O	C6	S1	H	Me	Me	A32

Table 85

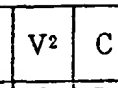
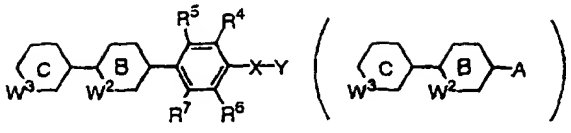
No.	V^2	C		R^8	R^9	R^{10}	A
Ie-11	O	C6	S1	H	Me	Me	A35
Ie-12	O	C1	S3	Me	–	OMe	A6
Ie-13	O	C1	S3	Me	–	OMe	A8
Ie-14	O	C1	S3	Me	–	OMe	A14
Ie-15	O	C1	S3	Me	–	OMe	A17
Ie-16	O	C1	S3	Me	–	OMe	A32
Ie-17	O	C4	S3	Me	–	OMe	A8
Ie-18	O	C4	S3	Me	–	OMe	A14
Ie-19	O	C4	S3	Me	–	OMe	A17
Ie-20	O	C4	S3	Me	–	OMe	A32
Ie-21	O	C4	S3	Me	–	OMe	A33
Ie-22	O	C9	S3	Me	–	OMe	A6
Ie-23	O	C9	S3	Me	–	OMe	A8
Ie-24	O	C9	S3	Me	–	OMe	A32
Ie-25	O	C9	S3	Me	–	OMe	A33
Ie-26	NH	C1	S3	Me	–	OMe	A6
Ie-27	NH	C1	S3	Me	–	OMe	A8
Ie-28	NH	C1	S3	Me	–	OMe	A14
Ie-29	NH	C1	S3	Me	–	OMe	A17
Ie-30	NH	C1	S3	Me	–	OMe	A32
Ie-31	NH	C4	S3	Me	–	OMe	A8
Ie-32	NH	C4	S3	Me	–	OMe	A14
Ie-33	NH	C4	S3	Me	–	OMe	A17
Ie-34	NH	C4	S3	Me	–	OMe	A32
Ie-35	NH	C4	S3	Me	–	OMe	A33
Ie-36	NH	C9	S3	Me	–	OMe	A6
Ie-37	NH	C9	S3	Me	–	OMe	A8
Ie-38	NH	C9	S3	Me	–	OMe	A14
Ie-39	NH	C9	S3	Me	–	OMe	A17
Ie-40	NH	C9	S3	Me	–	OMe	A32
Ie-41	NH	C9	S3	Me	–	OMe	A33

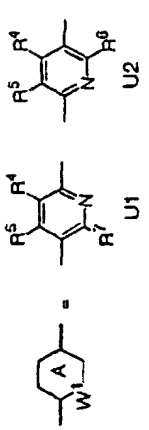
Table 86



If

No.			R^8	R^9	R^{10}	A
If-1	morpholino	S1	H	H	H	A6
If-2	morpholino	S1	H	H	H	A8
If-3	morpholino	S1	H	H	H	A32
If-4	morpholino	S1	H	H	H	A33
If-5	morpholino	S1	H	Me	Me	A6
If-6	morpholino	S1	H	Me	Me	A8
If-7	morpholino	S1	H	Me	Me	A32
If-8	morpholino	S1	H	Me	Me	A33
If-9	morpholino	S3	Me	–	OMe	A6
If-10	morpholino	S3	Me	–	OMe	A8
If-11	morpholino	S3	Me	–	OMe	A32
If-12	morpholino	S3	Me	–	OMe	A33
If-13	4-Me-piperazinyl	S3	Me	–	OMe	A6
If-14	4-Me-piperazinyl	S3	Me	–	OMe	A8
If-15	4-Me-piperazinyl	S3	Me	–	OMe	A32
If-16	4-Me-piperazinyl	S3	Me	–	OMe	A33
If-17	4-Ph-piperazinyl	S3	Me	–	OMe	A6
If-18	4-Ph-piperazinyl	S3	Me	–	OMe	A8
If-19	4-Ph-piperazinyl	S3	Me	–	OMe	A32
If-20	4-Ph-piperazinyl	S3	Me	–	OMe	A33
If-21	1-imidazolyl	S3	Me	–	OMe	A6
If-22	1-imidazolyl	S3	Me	–	OMe	A8
If-23	1-imidazolyl	S3	Me	–	OMe	A32
If-24	1-imidazolyl	S3	Me	–	OMe	A33
If-25	1-triazolyl	S3	Me	–	OMe	A6
If-26	1-triazolyl	S3	Me	–	OMe	A8
If-27	1-triazolyl	S3	Me	–	OMe	A32
If-28	1-triazolyl	S3	Me	–	OMe	A33
If-29	2-prenyloxypyridin-5-yl	S1	H	Me	Me	A46
If-30	2-prenyloxypyridin-5-yl	S1	H	Me	Me	A42

Table 87



Ig'

U1

U2

No.		R^4	R^5	R^6	R^7	B		R^{12}	R^{13}	R^{14}	R^{16}	X-Y	X'-Y'
Ig-1	U1	H	H	–	H	B7	T2	H	H	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-2	U1	H	H	–	H	B7	T2	H	H	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-3	U1	H	H	–	H	B12	T2	H	H	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-4	U1	H	H	–	H	B12	T2	H	H	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-5	U1	H	H	–	H	B7	T2	H	H	H	–	$NHCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-6	U1	H	H	–	H	B12	T2	H	H	H	–	$NHCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-7	U1	H	H	–	H	B12	T5	H	–	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-8	U1	H	H	–	H	B12	T5	H	–	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-9	U1	H	H	–	H	B12	T8	H	–	–	H	$OCH_2CH=CMe_2$	NH_2
Ig-10	U1	H	H	–	H	B12	T8	H	–	–	H	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-11	U2	H	H	H	–	B7	T2	H	H	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-12	U2	H	H	H	–	B7	T2	H	H	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-13	U2	H	H	H	–	B12	T2	H	H	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-14	U2	H	H	H	–	B12	T2	H	H	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-15	U2	H	H	H	–	B7	T2	H	H	H	–	$NHCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-16	U2	H	H	H	–	B12	T2	H	H	H	–	$NHCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-17	U2	H	H	H	–	B12	T5	H	–	H	–	$OCH_2CH=CMe_2$	NH_2
Ig-18	U2	H	H	H	–	B12	T5	H	–	H	–	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$
Ig-19	U2	H	H	H	–	B12	T8	H	–	–	H	$OCH_2CH=CMe_2$	NH_2
Ig-20	U2	H	H	H	–	B12	T8	H	–	–	H	$OCH_2CH=CMe_2$	$NHCH_2CH=CMe_2$

Table 88

No.	mp. ^{1}H-NMR
Ia-2	195-197 °C, ^{1}H-NMR ($CDCl_3$-DMSO-d_6) δ 1.77 (3H, s), 1.82 (3H, s), 4.63 (2H, J = 6.8), 5.52 (1H, br t, J = 6.8), 6. 25 (1H, s), 6.93-6.98 (3H, m), 7.10 (1H, dd, J = 2.2, 8.3), 7. 20 (1H, d, J = 2.2), 7.69 (1H, d, J = 8.1), 7.85 (1H, dd, J = 2.0, 8.1), 7.89 (2H, d, J = 8.8), 8.53 (1H, br s), 8.82 (1H, d, J = 2.0)
Ia-4	181-182 °C, ^{1}H-NMR ($CDCl_3$) δ 3.18 (3H, s), 5.19 (2H, s), 5,78 (1H, s), 7.04 (1H, d, J = 8.3), 7.12 (1H, dd, J = 2.2, 8.3), 7.25 (1H, d. J = 2.2), 7.38-7.45 (7H, m), 7.76 (1H, br d, J = 8.3), 7.92 (1H, dd, J = 2.4, 8.3), 8.88 (1H, br d, J = 2.4)
Ia-5	171-172 °C, ^{1}H-NMR ($CDCl_3$) δ 3.40 (3H,s), 3.43 (3H,s), 5.29 (2H, s), 7.36-7.53 (8H, m), 7.78-7.81 (2H, m), 8.09 (1H, d, J = 8.3), 8.21 (1H, dd, J = 2.2, 8.3), 8.25 (2H, d, J = 8.8), 9.02 (1H, br s)
Ia-6	165-166 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 3.18 (3H, s), 3.25 (3H, s), 4.65 (2H, d, J = 6.8), 5.50 (1H, br t, J = 6.8), 7.13 (1H. d, J = 8.5), 7.42 (2H, d, J = 8.8), 7.53 (1H, dd, J = 2.2, 8.5), 7.58 (1H, d, J = 2.2), 7.77 (1H, dd, J = 0.7, 8.3), 7.92 (1H, dd, J = 2.2, 8.3), 8.10 (2H, d, J = 8.8), 8.88 (1H, dd, J = 0.7, 2.2)
Ia-8	176-177 °C, ^{1}H-NMR ($CDCl_3$) δ 3.87 (3H, s), 5.18 (2H, s), 5.77 (1H, s), 7.01 (2H, d, J = 9.0), 7.02 (1H. d, J = 8.6), 7.11 (1H, dd, J = 2.2, 8.6), 7.24 (1H, d, J = 2.2), 7.40-7.45 (5H, m), 7.71 (1H, dd, J = 1.0, 8.3), 7.86 (1H, dd, J = 2.4, 8.3), 7.99 (2H. d, J = 9.0), 8.84 (1H, dd, J = 1.0, 2.4)
Ia-9	187-188 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 3.88 (3H, s), 5.19 (2H, s), 7.02 (2H, d, J = 8.8), 7.17 (1H. d, J = 8.6), 7.37-7.49 (5H, m), 7.51 (1H, dd, J = 2.2, 8.6), 7.59 (1H, d, J = 2.2). 7.73 (1H, br d, J = 8.3), 7.86 (1H, dd, J = 2.4. 8.3). 8.00 (2H, d, J = 8.8), 8.83 (1H, br d, J = 2.4)
Ia-10	141-142 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s),3.88 (3H, s), 4.63 (2H, d, J = 6.8), 5.52 (1H, br t, J = 6.8). 5.79 (1H, s), 6.97 (1H, d, J = 8.3), 7.02 (2H, d, J = 9.0), 7.11 (1H, dd, J = 2.2, 8.3), 7.21 (1H, d, J = 2.2), 7.71 (1H, dd, J = 0.7, 8.3), 7.86 (1H, dd, J = 2.4, 8.3), 7.99 (2H, d, J = 9.0), 8.85 (1H. dd. J = 0.7, 2.4)
Ia-11	161-162 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s). 3.24 (3H, s), 3.88 (3H, s), 4.65 (2H, d, J = 6.8), 5.50 (1H, br t, J = 6.8), 7.02 (2H, d, J = 9.0), 7.11 (1H, d, J = 8.5), 7.52 (1H, dd, J = 2.4, 8.5), 7.57 (1H, d, J = 2.4), 7.73 (1H, dd, J = 0.7, 8.3), 7.86 (1H, dd, J = 2.4, 8.3), 8.00 (2H, d, J = 9.0), 8.83 (1H. dd. J = 0.7, 2.4)
Ia-12	233-236 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 3.14 (3H, s), 5.20 (2H, s), 5.21 (2H, s), 7.17 (2H, dd, J = 1.7, 8.3), 7.36-7.54 (11H, m), 7.59 (1H, d, J = 2.4), 7.73 (1H, d. J = 8.3), 7.78 (1H, dd, J = 2.4, 8.3), 7.98-8.02 (2H, m), 8.84 (1H, d. J = 2.5)
Ia-13	150-151 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (6H, s), 4.63 (4H, d. J =6.8), 5.52 (2H, br t, J = 6.8), 5.73 (1H. s), 5.78 (1H, s), 6.97 (2H, d, J = 8.3), 7.10 (1H, dd, J = 2.2, 8.3), 7.21 (1H, d, J = 2.2), 7.57 (1H, dd, J = 2.2, 8.3), 7.60 (1H, d. J = 2.2), 7.69 (1H, br d, J = 8.3), 7.85 (1H, dd, J = 2.4, 8.3). 8.84 (1H. br d. J = 2.4)
Ia-15	172-173 °C, ^{1}H-NMR ($CDCl_3$) δ 5.11 (1H,s), 5.17 (2H,s), 5.75 (1H,s), 6.93 (2H, d, J = 8.5), 6.95-7.03 (2H, m), 7.11 (1H, d, J = 2.0), 7.38-7.45 (5H, m), 7.62 (1H. d, J = 8.1), 7.67 (1H, d. J = 8.1), 7.96 (2H. d, J = 8.5)

Table 89

Ia-16	159-161 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 4.63 (2H, d, J= 6.8), 5.02 (1H, s), 5.52 (1h, br t, J = 6.8), 5.75 (1H, s), 6.92 (2H, d, J = 8.5), 6.94 (1H, d, J =8.3), 6.97 (1H, dd, J = 2.2, 8.3), 7.08 (1H, d, J = 2.2), 7.62 (1H, d, J = 8.1), 7.66 (1H, d, J = 8.1), 7.95 (2H, d, J = 8.5)
Ia-17	134-134.5 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 3.18 (3H, s), 5.20 (2H, s), 7.16 (1H, d, J = 8.5), 7.37-7.50 (9H, m), 7.71 and 7.74 (each 1H, ABq, J = 8.1), 8.10 (2H, d, J = 8.8)
Ia-18	99-100 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 3.19 (3H, s), 3.24 (3H, s), 4.66 (2H, d, J= 6.8), 5.51 (1h, br t, J = 6.8), 7.10 (1H, d, J = 8.5), 7.38-7.48 (4H, m), 7.71 and 7.74 (each 1H, ABq, J = 8.1), 8.10 (2H, d, J = 8.8)
Ia-21	215-216 °C, ^{1}H-NMR ($CDCl_3$-DMSO-d_6) δ 1.77 (3H, s), 1.82 (3H, s), 2.35 (3H, s), 4.63 (2H, d, J = 6.8), 5.54 (1H, br t, J = 6.8), 6.51 (1H, s), 6.79 (1H, dd, J = 2.2, 8.1), 6.93-6.96 (4H, m), 7.52 (1H, s), 7.87 (2H, d, J = 8.8), 8.43 (1H, s), 8.79 (1H, s)
Ia-22	203-204 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.80 (3H, s), 2.37 (3H, s), 3.89 (3H, s), 4.64 (2H, d, J = 6.8), 5.56 (1H, br t, J = 6.8), 6.20 (1H, br s), 6.86-6.89 (2H, m), 6.89 (2H, d, J = 8.8), 6.97 (1H, d, J = 8.5), 7.55 (1H, s), 7.88 (2H, d, J = 8.8), 8.48 (1H, s)
Ia-23	140-141 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 3.17 (3H, s), 5.18 (2H, s), 5.78 (1H, s), 6.83 (1H, dd, J = 2.2, 8.3), 6.98 (1H, d, J = 2.2), 7.03 (1H, d, J = 8.3), 7.40 (2H, d, J = 8.8), 7.41-7.47 (5H, m), 7.59 (1H, s), 8.07 (2H, d, J = 8.8), 8.50 (1H, s)
Ia-24	156-157 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 3.13 (3H, s), 3.18 (3H, s), 5.20 (2H, s), 7.18 (1H, d, J = 8.5), 7.26 (1H, dd, J = 2.0, 8.5), 7.36-7.49 (8H, m), 7.61 (1H, s), 8.07 (2H, d, J = 90.), 8.50 (1H, s)
Ia-25	111-112 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.83 (3H, s), 2.39 (3H, s), 3.18 (3H, s), 3.24 (3H, s), 4.65 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.11 (1H, d, J = 8.5), 7.26 (1H, dd, J = 2.2, 8.5), 7.34 (1H, d, J = 2.2), 7.40 (2H, d, J = 8.8), 7.60 (1H, s), 8.07 (2H, d, J = 8.8), 8.50 (1H, s)
Ia-26	124-127 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.80 (3H, s), 2.39 (3H, s), 3.18 (3H, s), 3.90 (3H, s), 4.65 (2H, d, J = 6.8), 5.57 (1H, br t, J = 6.8), 6.87-6.91 (2H, m), 6.98 (1H, d, J = 8.3), 7.40 (2H, d, J = 8.8), 7.60 (1H, s), 8.08 (2H, d, J = 8.8), 8.53 (1H, s)
Ia-27	213-214 °C, ^{1}H-NMR ($CDCl_3$) δ 2.58 (3H, s), 5.21 (2H, s), 5.87 (1H, s), 7.06-7.18 (5H, m), 7.42-7.49 (7H, m), 8.29 (1H, brs), 8.86 (1H, brs), 9.01 (1H, brs)
Ia-28	198-199 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.42 (3H, s), 4.63 (2H, d, J = 6.7), 5.51 (1H, t, J = 6.7), 5.68 (1H, s), 5.77 (1H, s), 6.87 (2H, d, J = 7.8), 6.96 (1H, d, J = 8.5), 7.10 (1H, dd, J = 8.5, 2.4), 7.21 (1H, d, J = 2.4), 7.44 (2H, d, J = 7.8) 7.71 (1H, d, J = 2.4), 8.68 (1H, d, J = 2.4),
Ia-31	198-199 °C, ^{1}H-NMR ($CDCl_3$) δ 2.53 (3H, s), 3.14 (3H, s), 3.21 (3H, s), 5.21 (2H, s), 7.22 (1H, d, J = 8.5), 7.39-7.49 (7H, m), 7.55-7.62 (2H, m), 7.73 (2H, d, J = 9.2), 8.05 (1H, brs), 8.84 (1H, brs)
Ia-32	142-144 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.82 (3H, s), 2.43 (3H, s), 3.17 (3H, s), 3.24 (3H, s), 4.65 (2H, d, J = 6.7), 5.50 (1H, br t, J = 6.7), 7.12 (1H, d, J = 8.5), 7.40 (2H, dd, J = 6.7, 1.8), 7.52 (1H, dd, J = 8.6, 2.4), 7.57 (1H, s) 7.64 (2H, d, J = 8.5), 7.74 (1H, s) 8.70 (1H, d, J = 2.5)

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Ia-35	152-154 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.59 (3H, s), 4.12 (2H, d, J = 7.3), 5.53 (1H, t, J = 7.3), 5.77 (1H, brs), 6.79-6.95 (5H, m), 7.49 (1H, d, J = 8.0), 7.55 (1H, d, J = 8.0), 7.88 (2H, d, J = 8.5)
Ia-38	109-112 °C, ^{1}H-NMR ($CDCl_3$) δ 2.60 (3H, s), 3.12 (3H, s), 3.16 (3H, s), 5.19 (2H, s), 7.15 (1H, d, J = 8.5), 7.27 (1H, dd, J = 7.8, 1.8), 7.35-7.50 (8H, m), 7.59 (2H, s), 8.09 (2H, d, J = 9.2)
Ia-39	oil, 1.78 (3H, s), ^{1}H-NMR ($CDCl_3$) δ 1.82 (3H, s), 2.60 (3H, s), 3.17 (3H, s), 3.24 (3H, s), 4.65 (2H, d, J = 6.7), 5.51 (1H, br t, J = 6.7), 7.09 (1H, d, J = 8.6), 7.24-7.27 (1H, m), 7.34-7.35 (2H, m), 7.40 (1H, d, J = 8.6) 7.59 (2H, s), 8.09 (2H, d, J = 9.2)
Ia-42	175-176 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.32 (3H, s), 2.54 (3H, s), 4.63 (2H, d, J = 6.8), 5.52 (1H, brs), 5.53 (1H, t, J = 6.8), 5.75 (1H, brs), 6.80-6.84 (3H, m), 6.93 (1H, d, J = 7.8), 6.95 (1H, d, J = 1.8), 7.38-7.41 (3H, m)
Ia-43	177-178 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.79 (3H, s), 2.32 (3H, s), 2.56 (3H, s), 3.90 (3H, s), 4.64 (2H, d, J = 6.8), 5.56 (1H, t, J = 6.8), 6.75 (2H, d, J = 8.5), 6.87-6.97 (3H, m), 7.33 (2H, d, J = 8.5), 7.43 (1H, s)
Ia-45	79-81 °C, ^{1}H-NMR ($CDCl_3$) δ 2.33 (3H, s), 2.53 (3H, s), 3.16 (3H, s), 5.18 (2H, s), 5.75 (1H, s), 6.83 (1H, dd, J = 7.8, 1.8), 6.98 (1H, d, J = 1.8), 7.00 (1H, d, J = 8.5), 7.37-7.55 (8H, m), 7.63 (2H, d, J = 8.5)
Ia-46	163-164 °C, ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 2.54 (3H, s), 3.13 (3H, s), 3.17 (3H, s), 5.19 (2H, s), 7.15 (1H, d, J = 8.5), 7.27 (1H, dd, J = 8.5, 2.5), 7.35-7.50 (9H, m), 7.62 (2H, d, J = 8.5)
Ia-47	oil, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.34 (3H, s), 2.54 (3H, s), 3.17 (3H, s), 3.23 (3H, s), 4.66 (2H, d, J = 7.3), 5.51 (1H, br t, J = 7.3), 7.08 (1H, d, J = 8.6), 7.26 (1H, dd, J = 8.6, 2.4), 7.35 (1H, d, J = 2.4), 7.39 (2H, d, J = 8.6), 7.43 (1H, s), 7.64 (2H, d, J = 8.6)
Ia-48	149-150 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.80 (3H, s), 2.35 (3H, s), 2.54 (3H, s), 3.17 (3H, s), 3.90 (3H, s), 4.64 (2H, d, J = 6.8), 5.57 (1H, t, J = 6.8), 6.87 (1H, s), 6.88-6.98 (2H, m), 7.39 (2H, d, J = 8.5), 7.44 (1H, s), 7.63 (2H, d, J = 8.5)
Ia-65	237-239 °C, ^{1}H-NMR ($CDCl_3$-CD_3OD) δ 3.16 (3H, s), 5.21 (2H, s), 6.96 (2H, d, J = 8.6), 7.20 (1H, d, J = 9.3), 7.38-7.51 (5H, m), 7.72 (1H, br d, J = 8.3), 7.90-7.95 (3H, m), 8.80 (1H, br d, J = 2.4)
Ia-66	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 5.59 (1H, br s), 5.75 (1H, s), 6.95 (2H, d, J = 8.6), 6.97 (1H, d, J = 8.3), 7.50 (2H, d, J = 8.6), 7.56 (1H, dd, J = 2.2, 8.3), 7.59 (1H, d, J = 2.2), 7.69 (1H, dd, J = 0.7, 8.3), 7.86 (1H, 2.4, 8.3), 8.83 (1H, dd, J = 0.7, 2.4)
Ia-68	167-168 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 3.20 (3H, s), 5.21 (2H, s), 7.18 (1H, d, J = 8.3), 7.38-7.48 (7H, m), 7.67 (2H, d, J = 8.8), 7.76 (1H, br d, J = 8.3), 7.91 (1H, dd, J = 2.4, 8.3), 7.99-8.03 (2H, m), 8.85 (1H, br d, J = 2.4)
Ia-69	151-152.5 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 3.20 (3H, s), 3.24 (3H, s), 4.66 (2H, d, J = 6.8), 5.50 (1H, br t, J = 6.8), 7.12 (1H, d, J = 9.3), 7.42 (2H, d, J = 8.5), 7.67 (2H, d, J = 8.5), 7.76 (1H, br d, J = 8.3), 7.90 (1H, dd, J = 2.4, 8.3), 8.00-8.03 (2H, m), 8.85 (1H, br d, J = 2.4)
Ia-71	220-221 °C ^{1}H-NMR ($CDCl_3$) δ 2.57 (3H, s), 3.51 (2H, brs), 5.18 (2H, s), 7.14 (1H, d, J = 7.3), 7.15-7.62 (11H, m), 8.11 (1H, d, J = 1.8), 8.78 (1H, d, J = 1.8)

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Ia-73	180-181 °C, ^{1}H-NMR ($CDCl_3$) δ 1.74 (3H, s), 1.79 (3H, s), 2.42 (3H, s), 4.61 (2H, d, J = 6.8), 5.50 (1H, t, J = 6.8), 6.84-6.96 (5H, m), 7.05 (1H, dd, J = 7.8, 1.8), 7.14 (1H, d, J = 1.8), 7.44 (2H, d, J = 9.2), 7.71 (1H, d, J = 1.8) 8.65 (1H, d, J = 1.8),
Ia-75	164-165 °C, ^{1}H-NMR ($CDCl_3$) δ 2.53 (3H, s), 3.13 (3H, s), 3.21 (3H, s), 5.19 (2H, s), 7.16 (1H, d, J = 7.3), 7.32-7.50 (7H, m), 7.61 (2H, dd, J = 8.5, 2.4), 7.70 (2H, d, J = 7.3), 7.79 (1H, d, J = 1.8) 8.76 (1H, d, J = 1.8)
Ia-76	151-152 °C ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.48 (3H, s), 3.20 (3H, s), 3.21 (3H, s), 4.65 (2H, d, J = 6.8), 5.50 (1H, t, J = 6.8), 7.11 (1H, d, J = 7.9), 7.41 (2H, d, J = 9.2), 7.55 (1H, dd, J = 7.8, 1.8), 7.58 (1H, s), 7.66 (2H, d, J = 7.9), 7.74 (1H, d, J = 1.8) 8.71 (1H, d, J = 1.8).
Ia-79	189-191 °C, ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 5.18 (2H, s), 5.29 (1H, br s), 5.71 (1H, s), 6.83 (1H, dd, J = 2.2, 8.3), 6.92 (2H, d, J = 8.6), 7.03 (1H, d, J = 8.3), 7.23 (2H, d, J = 8.6), 7.37-7.47 (5H, m), 7.54 (1H, s), 7.55 (1H, dd, J =2.2, 8.3), 7.60 (2H, d, J = 2.2), 8.45 (1H, s)
Ia-80	165-166 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.35 (3H, s), 4.63 (2H, d, J =6.8), 5.51 (1H, br t, J = 6.8), 5.75 (1H, s), 6.19 (1H, br s), 6.92 (2H, d, J = 8.8), 6.96 (1H, d, J = 8.8), 7.21 (2H, d, J = 8.8), 7.52-7.57 (3H, m), 8.44 (1H, s)
Ia-82	189-190 °C, ^{1}H-NMR ($CDCl_3$) δ 2.35 (3H, s), 3.13 (3H, s), 3.22 (3H, s), 5.20 (2H, s), 7.18 (1H, d, J = 9.0), 7.36-7.49 (9H, m), 7.58 (1H, s), 7.99-8.02 (2H, m), 8.46 (1H, s)
Ia-83	169-170 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.35 (3H, s), 3.22 (3H, s), 3.24 (3H, s), 4.66 (2H, d, J =6.8), 5.50 (1H, br t, J = 6.8), 7.11 (1H, d, J = 8.6), 7.40 (4H, s), 7.58 (1H, s), 7.96 (1H, d, J = 2.2), 8.00 (1H, dd, J =2.2, 8.6), 8.45 (1H, s)
Ia-85	143-146 °C, ^{1}H-NMR ($CDCl_3$) δ 2.53 (3H, s), 5.03 (1H, brs), 5.18 (2H, s), 5.72 (1H, s), 6.92 (2H, dd, J =7.8, 1.8), 7.02 (1H, d, J =6.8), 7.23 (2H, dd, J =7.3, 1.8), 7.33-7.48 (5H, m), 7.49-7.60 (3H, m), 7.67 (1H, d, J = 1.8)
Ia-87	168-169 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.56 (3H, s), 4.63 (2H, d, J =6.8), 4.84 (1H, s), 5.51 (1H, t, J = 6.8), 5.70 (1H, s), 6.91 (2H, d, J = 8.5), 6.95 (1H, d, J = 8.5), 7.22 (2H, s), 7.51 (2H, s), 7.55 (1H, dd, J =8.5, 2.4), 7.62 (1H, d, J = 2.4)
Ia-89	174-175 °C, ^{1}H-NMR ($CDCl_3$) δ 2.56 (3H, s), 3.13 (3H, s), 3.21 (3H, s), 5.20 (2H, s), 7.15 (1H, d, J = 8.5), 7.29-7.48 (9H, m), 7.56 (2H, s), 7.99 (1H, dd, J =8.5, 2.4), 8.03 (1H, d, J = 2.4)
Ia-90	141-142 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.56 (3H, s), 3.21 (3H, s), 3.24 (3H, s), 4.65 (2H, d, J =6.8), 5.50 (1H, t, J = 6.8), 7.10 (1H, d, J = 8.6), 7.36-7.43 (4H, m), 7.55 (2H, d, J =1.2), 7.98 (1H, dd, J =8.6, 2.4), 8.01 (1H, d, J = 1.2)
Ia-93	118-121 °C, ^{1}H-NMR ($CDCl_3$) δ 2.36 (3H, s), 2.51 (3H, s), 3.10 (3H, s), 5.10 (1H, brs), 5.18 (2H, s), 6.90 (2H, d, J = 8.6), 7.14 (1H, d, J = 8.6), 7.21-7.48 (8H, m), 7.52 (1H, dd, J = 8.6, 1.8), 7.58 (1H, d, J = 1.8)
Ia-94	168-169 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.33 (3H, s), 2.51 (3H, s), 4.61 (2H, d, J = 6.8), 5.32 (1H, brs), 5.51 (1H, t, J = 6.8), 5.73 (1H, s), 6.87-6.95 (3H, m), 7.04 (1H, dd, J = 8.5, 1.8), 7.14 (1H, d, J = 1.8), 7.21-7.24 (2H, m), 7.37 (1H, s)
Ia-96	140-141 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 2.50 (3H, s), 3.11 (3H, s), 3.21 (3H, s), 5.19 (2H, s), 7.16 (1H, d, J = 8.5), 7.33-7.51 (10H, m), 7.55 (1H, dd, J = 7.8, 1.8), 7.62 (1H, d, J = 1.8)

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Ia-97	106-107 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.38 (3H, s), 2.51 (3H, s), 3.20 (3H, s), 3.21 (3H, s), 4.64 (2H, d, J = 6.8), 5.49 (1H, t, J = 6.8), 7.10 (1H, d, J = 8.0), 7.35-7.44 (5H, m), 7.51-7.65 (2H, m)
Ia-125	121-122 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 3.90 (3H, s), 4.03 (3H, s), 5.21 (2H, s), 6.77 (1H, dd, J = 2.0, 8.3), 6.82 (1H, d, J = 2.0), 6.97 (1H, d, J = 8.3), 7.32-7.49 (8H, m), 8.46-8.49 (2H, m)
Ia-127	110-111 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.11 (2H, s), 7.06 (2H, d, J = 8.5), 7.22 (2H, d, J = 8.5), 7.34-7.51 (8H, m), 8.44-8.50 (2H, m)
Ia-128	115-116 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 4.03 (3H, s), 5.07 (2H, s), 7.06 (2H, d, J = 9.2), 7.21 (4H, d, J = 9.2), 7.36 (2H, d, J = 8.5), 7.45-7.51 (3H, m), 8.46-8.50 (2H, m)
Ia-129	129-130 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.39 (3H, s), 4.03 (3H, s), 4.56 (2H, d, J = 6.7), 5.55 (1H, br t, J = 6.7), 7.00 (2H, d, J = 8.5), 7.21 (2H, d, J = 8.5), 7.46-7.51 (3H, m), 8.46-8.50 (2H, m)
Ia-131	121-122 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.16 (2H, s), 5.75 (1h, s), 6.76 (1H, dd, J = 2.2, 8.3), 6.90 (1H, d, J = 2.2), 7.01 (1H, d, J = 8.1), 7.38-7.5 (8H, m), 8.46-8.50 (2H, m)
Ia-132	142-143 °C, ^{1}H-NMR ($CDCl_3$) δ 2.29 (3H, s), 2.41 (3H, s), 4.02 (3H, s), 5.14 (2H, s), 7.02 (1H, d, J = 1.2), 7.05-7.11 (2H, m), 7.33-7.49 (8H, m), 8.45-8.50 (2H, m)
Ia-133	161.5-162.5 °C, ^{1}H-NMR ($CDCl_3$) δ 2.42 (3H, s), 3.11 (3H, s), 4.03 (3H, s), 5.18 (2H, s), 7.14 (1H, d, J = 8.6), 7.21 (1H, dd, J = 2.0, 8.6), 7.31 (1H, d, J = 2.0), 7.37-7.50 (8H, m), 8.46-8.49 (2H, m)
Ia-134	142-143 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.23 (2H, s), 7.15 (1H, d, J = 8.5), 7.17-7.25 (2H, m), 7.33-7.51 (8H, m), 8.45-8.50 (2H, m)
Ia-135	132-133 °C, ^{1}H-NMR ($CDCl_3$) δ 2.37 (3H, s), 4.03 (3H, s), 4.94 (2H, s), 6.98 (1H, d, J = 8.6), 7.15 (1H, dd, J = 1.8, 8.6), 7.17 (1H, d, J = 1.8), 7.33-7.60 (11H, m), 7.87 (2H, d, J = 7.3), 8.45-8.59 (2H, m)
Ia-136	127-128 °C, ^{1}H-NMR ($CDCl_3$) δ 2.40 (3H, s), 2.42 (3H, s), 4.04 (3H, s), 5.14 (2H, s), 5.70 (1H, s), 6.79 (1H, dd, J = 1.8, 7.9), 6.90 (1H, d, J = 1.8), 7.05 (1H, d, J = 7.9), 7.22-7.36 (3H, m), 7.40 (1H, d, J = 6.7), 7.43-7.55 (3H, m), 8.44-8.50 (2H, m)
Ia-137	87-89 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 2.41 (3H, s), 4.03 (3H, s), 5.12 (2H, s), 5.73 (1H, s), 6.76 (1H, dd, J = 1.8, 7.9), 6.90 (1H, d, J = 1.8), 7.01 (1H, d, J = 7.9), 7.18-7.36 (4H, m), 7.43-7.53 (3H, m), 8.46-8.52 (2H, m)
Ia-138	114-115 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (6H, s), 4.02 (3H, s), 5.10 (2H, s), 5.74 (1H, s), 6.75 (1H, dd, J = 2.0, 8.3), 6.89 (1H, d, J = 2.0), 7.01 (1H, d, J = 8.3), 7.24 (2H, d, J = 8.6), 7.36 (2H, d, J = 8.6), 7.45-7.50 (3H, m), 8.46-8.50 (2H, m)
Ia-139	192-193 °C, ^{1}H-NMR ($CDCl_3$) δ 2.42 (3H, s), 2.43 (3H, s), 3.06 (3H, s), 4.04 (3H, s), 5.16 (2H, s), 7.15-7.33 (6H, m), 7.41-7.50 (4H, m), 8.46-8.51 (2H, m)
Ia-140	151-152 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 2.42 (3H, s), 3.12 (3H, s), 4.03 (3H, s), 5.14 (2H, s), 7.14 (1H, d, J = 8.5), 7.18-7.31 (6H, m), 7.46-7.50 (3H, m), 8.45-8.50 (2H, m)
Ia-141	188-189 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 2.41 (3H, s), 3.11 (3H, s), 4.03 (3H, s), 5.13 (2H, s), 7.14 (1H, d, J = 8.6), 7.20 (1H, dd, J = 2.2, 8.6), 7.22 (2H, d, J = 8.0), 7.30 (1H, d, J = 2.2), 7.36 (2H, d, J = 8.0), 7.47-7.50 (3H, m), 8.46-8.49 (2H, m)

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Ia-142	166-167 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 3.91 (3H, s), 4.03 (3H, s), 5.15 (2H, s), 6.18 (1H, s), 6.75 (1H, dd, J = 1.8, 7.9), 6.89 (1H, d, J = 2.4), 6.97 (1H, d, J = 7.9), 7.03 (1H, d, J = 7.9), 7.34-7.49 (5H, m), 8.46-8.50 (2H, m)
Ia-143	166-167 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 3.84 (3H, s), 4.03 (3H, s), 5.13 (2H, s), 5.74 (1H, s), 6.75 (1H, dd, J = 1.8, 8.5), 6.89 (1H, d, J = 1.8), 6.90-7.05 (4H, m), 7.34 (1H, d, J = 7.9), 7.44-7.50 (3H, m), 8.45-8.50 (2H, m)
Ia-144	125-126 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 3.85 (3H, s), 4.03 (3H, s), 5.08 (2H, s), 5.70 (1H, s), 6.76 (1H, dd, J = 1.8, 7.9), 6.89 (1H, d, J = 8.5), 6.96 (2H, d, J = 8.5), 7.02 (1H, d, J = 7.9), 7.38 (2H, d, J = 8.5), 7.44-7.50 (3H, m), 8.45-8.50 (2H, m)
Ia-145	193-195 °C, ^{1}H-NMR ($CDCl_3$) δ 2.42 (3H, s), 3.13 (3H, s), 3.87 (3H, s), 4.03 (3H, s), 5.21 (2H, s), 6.94 (1H, d, J = 7.9), 6.98-7.04 (1H, m), 7.19-7.21 (2H, m), 7.30 (1H, d, J = 1.8), 7.36 (1H, d, J = 7.9) 7.45-7.50 (4H, m), 8.45-8.50 (2H, m)
Ia-146	166-167 °C, ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 3.15 (3H, s), 3.84 (3H, s), 4.03 (3H, s), 5.16 (2H, s), 6.91 (1H, d, J = 8.5), 7.02-7.06 (2H, m), 7.12 (1H, d, J = 8.5), 7.20 (1H, dd, J = 1.8, 8.5), 7.30 (1H, d, J = 1.8), 7.35 (1H, d, J = 7.9) 7.45-7.49 (3H, m), 8.45-8.50 (2H, m)
Ia-147	171-172 °C ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 3.09 (3H, s), 3.84 (3H, s), 4.03 (3H, s), 5.10 (2H, s), 6.94 (2H, d, J = 8.5), 6.97-7.23 (2H, m), 7.29 (1H, d, J = 1.8), 7.39 (2H, d, J = 8.5), 7.45-7.49 (3H, m), 8.45-8.49 (2H, m)
Ia-148	177-179 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.27 (2H, s), 6.72 (1H, dd, J = 2.4, 8.5), 6.93 (1H, d, J = 1.8), 7.12 (1H, d, J = 7.9), 7.31-7.36 (2H, m), 7.46-7.49 (3H, m), 7.78 (1H, dt, J = 1.8, 7.3), 8.46-8.50 (2H, m), 8.68 (1H, d, J = 4.9), 9.76 (1H, s)
Ia-149	221-212 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.19 (2H, s), 5.69 (1H, s), 6.78 (1H, dd, J = 1.8, 7.9), 6.92 (1H, d, J = 2.4), 7.01 (1H, d, J = 8.5), 7.35-7.40 (1H, m), 7.45-7.51 (3H, m), 7.80 (1H, d, J = 7.9), 8.46-8.50 (2H, m), 8.65 (1H, d, J = 4.9), 8.72 (1H, s)
Ia-150	222-224 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 4.03 (3H, s), 5.19 (2H, s), 6.08 (1H, s), 6.75 (1H, dd, J = 1.8, 7.9), 6.92 (1H, d, J = 6.7), 6.94 (1H, s), 7.35 (2H, d, J = 6.1), 7.45-7.51 (3H, m), 8.25-8.50 (2H, m), 8.65 (2H, d, J = 5.5)
Ia-151	195-197 °C, ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 3.23 (3H, s), 4.03 (3H, s), 5.32 (2H, s), 7.13 (1H, d, J = 8.5), 7.20 (1H, dd, J = 2.4, 8.5), 7.26-7.33 (2H, m), 7.46-7.50 (3H, m), 7.62 (1H, d, J = 7.3), 7.78 (1H, dt, J = 1.8, 7.9), 8.45-8.50 (2H, m), 8.62 (1H, d, J = 4.9)
Ia-152	173-174 °C, ^{1}H-NMR ($CDCl_3$) δ 2.42 (3H, s), 3.13 (3H, s), 4.03 (3H, s), 5.21 (2H, s), 7.15 (1H, d, J = 7.9), 7.21 (1H, d, J = 1.8), 7.31 (1H, d, J = 1.8), 7.36-7.41 (1H, m), 7.47-7.89 (3H, m), 8.46-8.50 (2H, m), 8.73 (1H, s), 8.65 (1H, d, J = 4.9), 8.73 (1H, s)
Ia-153	186-187 °C, ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 3.20 (3H, s), 4.03 (3H, s), 5.22 (2H, s), 7.06 (1H, d, J = 8.5), 7.21 (1H, dd, J = 1.8, 8.5), 7.32 (1H, d, J = 2.4), 7.42 (1H, d, J = 6.1), 7.47-7.50 (3H, m), 8.45-8.50 (2H, m), 8.68 (2H, d, J = 4.9)
Ia-154	112-113 °C, ^{1}H-NMR ($CDCl_3$) δ 2.37 (3H, s), 3.16 (2H, t, J = 6.7), 4.02 (3H, s), 4.32 (2H, t, J = 6.7), 5.55 (1H, s), 6.74 (1H, dd, J = 1.8, 8.5), 6.85 (1H, d, J = 1.8), 6.93 (1H, d, J = 8.5), 7.25-7.39 (5H, m), 7.45-7.49 (3H, m), 8.45-8.49 (2H, m)

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Ia-155	169-170 °C, ^{1}H-NMR ($CDCl_3$) δ 2.39 (3H, s), 2.88 (3H, s), 3.18 (2H, t, J = 6.7), 4.02 (3H, s), 4.35 (2H, t, J = 6.7), 7.07 (1H, d, J = 8.5), 7.19 (1H, dd, J = 1.8, 7.9), 7.25-7.38 (6H, m), 7.46-7.49 (3H, m), 8.44-8.49 (2H, m)
Ia-156	117-119 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.39 (3H, s), 4.03 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, br t, J = 6.8), 5.75 (1H, s), 6.75 (1H, dd, J = 2.2, 8.3), 6.87 (1H, d, J = 2.2), 6.94 (1H, d, J =8.3), 7.45-7.50 (3H, m), 8.46-8.49 (2H, m)
Ia-157	121-124 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H,s), 2.42 (3H, s), 3.23 (3H,s), 3.40 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.07 (1H, d, J = 8.6), 7.19 (1H, dd, J = 2.0, 8.6), 7.28 (1H, d, J = 2.0), 7.45-7.50 (3H, m), 8.45-8.49 (2H, m)
Ia-159	79-80 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.76 (3H, s), 2.38 (3H, s), 2.54 (2H, q, J = 6.7), 4.03 (3H, s), 4.08 (2H, t, J = 6.7), 5.23 (1H, t, J = 7.3), 5.71(1H, s), 6.74 (1H, dd, J = 1.8, 7.9), 6.87 (1H, d, J = 1.8), 6.92 (1H, d, J = 7.9), 7.44-7.51 (3H, m), 8.45-8.50 (2H, m)
Ia-160	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 1.69 (3H, s), 1.74 (3H, s), 2.41 (3H, s), 2.56 (2H, q, J = 6.7), 3.21 (3H, s), 4.03 (3H, s), 4.08 (2H, t, J = 6.7), 5.22 (1H, t, J = 6.7), 7.06 (1H, d, J = 7.9), 7.20 (1H, dd, J = 1.8, 7.9), 7.28 (1H, d, J = 1.8), 7.46-7.50 (3H, m), 8.45-8.50 (2H, m)
Ia-162	200.5-201.5 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 3.11 (3H, s), 4.01 (3H, s), 5.17 (2H, s), 5.38 (1H, s), 6.90 (2H, d, J = 8.8), 7.13 (1H, d, J = 8.5), 7.19 (1H, dd, J = 2.0, 8.5), 7.29 (1H, d, J = 2.0), 7.37-7.49 (5H, m), 8.37 (2H, d, J = 8.8)
Ia-163	163-168 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.36 (3H, s), 4.01 (3H, s), 4.62 (2H, d, J = 6.6), 5.53 (1H, br t, J = 6.6), 5.58 (1H, br), 5.74 (1H, br s), 6.73 (1H, dd, J = 2.0, 8.3), 6.86 (1H, d, J = 2.0), 6.89 (2H, d, J = 8.8), 6.93 (1H, d, J = 8.3), 8.37 (2H, J = 8.8)
Ia-167	185.5-186.5 °C, ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 3.11 (3H, s), 3.18 (3H, s), 4.02 (3H, s), 5.18 (2H, s), 7.15 (1H, d, J = 8.3), 7.21 (1H, dd, J = 2.0, 8.3), 7.30 (1H, d, J = 2.0), 7.36-7.49 (7H, m), 8.54 (2H, d, J = 8.8)
Ia-168	138-139 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.41 (3H, s), 3.18 (3H, s), 3.22 (3H, s), 4.02 (3H, s), 4.64 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.08 (1H, d, J = 8.5), 7.19 (1H, dd, J = 2.0, 8.5), 7.28 (1H, d, J = 2.0), 7.39 (2H, d, J = 9.0), 8.54 (2H, J = 9.0)
Ia-173	202-204 °C, ^{1}H-NMR ($CDCl_3$) δ 2.40 (3H, s), 2.55 (3H, s), 3.11 (3H, s), 4.02 (3H, s), 5.17 (2H, s), 7.14 (1H, d, J = 8.5), 7.20 (1H, dd, J = 2.0, 8.5), 7.30 (1H, d, J = 2.0), 7.33 (2H, br d, J = 8.6), 7.37-7.50 (5H, m), 8.40 (2H, br d, J = 8.6)
Ia-175	205-206 °C, ^{1}H-NMR ($CDCl_3$) δ 2.44 (3H, s), 3.10 (3H, s), 3.12 (3H, s), 4.05 (3H, s), 5.18 (2H, s), 7.16 (1H, d, J = 8.5), 7.21 (1H, dd, J = 2.0, 8.5), 7.31 (1H, d, J = 2.0), 7.37-7.50 (5H, m), 8.05 (2H, br d, J = 8.6), 8.68 (2H, br d, J = 8.6)
Ia-176	178-179 °C, ^{1}H-NMR ($CDCl_3$) δ 2.40 (3H, s), 3.11 (3H, s), 4.01 (3H, s), 5.17 (2H, s), 7.12-7.22 (4H, m), 7.29 (1H, d, J = 2.0), 7.37-7.50 (5h, m), 8.48 (2H, dd, J = 5.6, 9.0)
Ia-177	127-128 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.37 (3H, s), 4.01 (3H, s), 4.62 (2H, d, J = 6.8), 5.53 (1H, br t, J = 6.8), 5.74 (1H, s), 6.74 (1H, dd, J = 2.0, 8.3), 6.86 (1H, d, J = 2.0), 6.94 (1H, d, J = 8.3), 7.14 (2H, d, J = 8.8), 8.48 (2H, dd, J = 5.6, 8.8)

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Ia-178	143-144 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.40 (3H, s), 3.23 (3H, s), 4.02 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.05-7.20 (4H, m), 7.27 (1H, d, J = 2.2), 8.48 (2H, dd, J = 5.6, 9.0)
Ia-179	118-120 °C, ^{1}H-NMR ($CDCl_3$) δ 2.43 (3H, s), 3.12 (3H, s), 4.05 (3H, s), 5.18 (2H, s), 7.15 (1H, d, J = 8.6), 7.21 (1H, dd, J = 2.0, 8.6), 7.31 (1H, d, J = 2.0), 7.38-7.50 (5H, m), 7.60 (1H, br t, J = 7.8), 7.73 (1H, br d, J = 7.8), 8.67 (1H, br d, J = 7.8), 8.75 (1H, br s)
Ia-180	114-115 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.40 (3H, s), 4.04 (3H, s), 4.63 (2H, d, J = 6.8), 5.53 (1H, br t, J= 6.8), 5.74 (1H, s), 6.75 (1H, dd, J = 2.0, 8.3), 6.87 (1H, d, J = 2.0), 6.95 (1H, d, J = 8.3), 7.60 (1H, t, J = 7.8), 7.72 (1H, br d, J = 7.8), 8.67 (1H, br d, J =7.8), 8.75 (1H, s)
Ia-181	102-103 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.43 (3H, s), 3.23 (3H, s), 4.05 (3H, s), 4.64 (2H, d, J = 6.8), 5.51 (1H, br t, J= 6.8), 7.08 (1H, d, J = 8.6), 7.20 (1H, dd, J = 2.2, 8.6), 7.28 (1H, d, J = 2.2), 7.60 (1H, t, J = 7.6), 7.73 (1H, d, J = 7.6), 8.67 (1H, d, J =7.6), 8.75 (1H, s)
Ia-182	155-156 °C, ^{1}H-NMR ($CDCl_3$) δ 2.41 (3H, s), 4.06 (3H, s), 5.17 (2H, s), 5.75 (1H, s), 6.76 (1H, dd, J = 2.0, 8.3), 6.90 (1H, d, J = 2.0), 7.02 (1H, d, J = 8.3), 7.40-7.48 (5H, m), 7.65 (1H, t, J = 8.1), 8.31 (1H, ddd, J = 1.2, 2.5, 8.1), 8.83 (1H, ddd, J = 1.2, 1.5, 8.1), 9.31 (1H, dd, J = 1.5, 2.5)
Ia-183	160-167 °C, ^{1}H-NMR ($CDCl_3$) δ 2.44 (3H, s), 3.12 (3H, s), 4.06 (3H, s), 5.19 (2H, s), 7.16 (1H, d, J = 8.5), 7.22 (1H, dd, J = 2.2, 8.5), 7.31 (1H, d, J = 2.2), 7.38-7.49 (5H, m), 7.65 (1H, t, J = 8.1), 8.32 (1H, ddd, J = 1.2, 2.4, 8.3), 8.83 (1H, ddd, J = 1.2, 1.5, 8.3), 9.31 (1H, dd, J = 1.5, 2.4)
Ia-184	153-155 °C, ^{1}H-NMR ($CDCl_3$) 2.40 (3H, s), 3.11 (3H, s), 4.02 (3H, s), 5.17 (2H, s), 6.81 (1H, ddd, J = 1.2, 2.5, 7.8), 7.14 (1H, d, J = 8.5), 7.20 (1H, dd, J = 2.2, 8.5), 7.27 (1H, t, J = 7.8), 7.30 (1H, d, J = 2.2), 7.37-7.48 (5H, m), 7.81 (1H, dd, J = 1.5, 2.5), 7.88 (1H, ddd, J = 1.2, 1.5, 7.8)
Ia-185	143-144 °C, ^{1}H-NMR ($CDCl_3$) δ 2.22 (3H, s), 2.40 (3H, s), 3.11 (3H, s), 4.03 (3H, s), 5.17 (2H, s), 7.14 (1H, d, J = 8.6), 7.21 (1H, dd, J= 2.0, 8.6), 7.30 (1H, d, J = 2.0), 7.31 (1H, s), 7.37-7.48 (6H, m), 7.91 (1H, br d, J = 8.1), 8.23 (1H, br d, J = 8.1), 8.35 (1H, br s)
Ia-186	171-172 °C, ^{1}H-NMR ($CDCl_3$) δ 2.40 (3H, s), 3.05 (3H, s), 3.12 (3H, s), 4.02 (3H, s), 5.18 (2H, s), 6.59 (1H, br s), 7.14 (1H, d, J = 8.6), 7.20 (1H, dd, J= 2.0, 8.6), 7.30 (1H, d, J = 2.0), 7.37-7.52 (7H, m), 8.24 (1H, br s), 8.31 (1H, br d, J = 6.8)
Ia-187	165-167 °C, ^{1}H-NMR ($CDCl_3$) 1.77 (3H, s), 1.83 (3H, s), 2.39 (3H, s), 3.05 (3H, s), 4.03 (3H, s), 4.6 (2H, d, J = 6.8), 5.5 (1H, br t, J = 6.8), 5.74 (1H, s), 6.45 (1H, br s), 6.73 (1H, dd, J = 2.2, 8.3), 6.86 (1H, d, J = 2.2), 6.94 (1H, d, J = 8.3), 7.45-7.52 (2H, m), 8.24 (1H, m), 8.30-8.34 (1H, m)
Ia-188	150-151 °C, ^{1}H-NMR ($CDCl_3$) δ 1.58 (3H, s), 1.67 (3H, s), 2.41 (3H, s), 2.96 (3H, s), 3.12 (3H, s), 4.03 (3H, s), 4.36 (2H, d, J = 7.3), 5.18 (2H, s), 5.29 (1H, br t, J= 7.3), 7.15 (1H, d, J = 8.6), 7.20 (1H, dd, J = 2.0, 8.6), 7.29 (1H, d, J = 2.0), 7.37-7.48 (7H, m), 8.42-8.45 (2H, m)
Ia-189	91-94 °C, ^{1}H-NMR ($CDCl_3$) 1.58 (3H, s), 1.67 (3H, s), 1.77 (3H, s), 1.83 (3H, s), 2.38 (3H, s), 2.96 (3H, s), 4.02 (3H, s), 4.36 (2H, d, J = 6.8), 4.62 (2H, d, J = 6.8), 5.29 (1H, br t, J = 6.8), 5.52 (1H, br t, J = 6.8), 5.76 (1H, s), 6.73 (1H, dd, J = 2.2, 8.3), 6.86 (1H, d, J = 2.2), 6.94 (1H, d, J = 8.3), 7.45-7.51 (2H, m), 8.42-8.46 (2H, m)

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Ia-190	110-111 °C, ^{1}H-NMR ($CDCl_3$) δ 1.58 (3H, s), 1.67 (3H, s), 1.77 (3H, s), 1.82 (3H, s), 2.41 (3H, s), 2.97 (3H, s), 3.23 (3H, s), 4.02 (3H, s), 4.36 (2H, d, J = 7.1), 4.64 (2H, d, J = 7.1), 5.29 (1H, br t, J= 7.1), 5.51 (1H, br t, J= 7.1), 7.08 (1H, d, J = 8.5), 7.19 (1H, dd, J = 2.0, 8.5), 7.27 (1H, d, J = 2.0), 7.46-7.52 (2H, m), 8.43 (2H, m)
Ia-191	131-132 °C
Ia-192	171.5-172 °C, ^{1}H-NMR ($CDCl_3$) δ 2.40 (3H, s), 3.11 (3H, s), 3.89 (3H, s), 5.18 (2H, s), 7.15 (1H, d, J = 8.6), 7.22 (1H, dd, J = 2.0, 8.6), 7.30 (1H, d, J = 2.0), 7.38-7.50 (5H, m), 7.56 (1H, ddd, J = 1.5, 7.6, 7.6), 7.66 (1H, ddd, J = 1.5, 7.6, 7.6), 7.73 (1H, dd, J = 1.5, 7.6), 8.17 (1H, dd, J = 1.5, 7.6)
Ia-194	249-251 °C, ^{1}H-NMR ($CDCl_3$) δ 2.27 (3H, s), 2.45 (3H, s), 3.12 (3H, s), 4.05 (3H, s), 5.30 (2H, s), 7.13-7.24 (3H, m), 7.31 (1H, d, J = 2.0), 7.38-7.50 (6H, m), 8.62 (1H, dd, J = 1.7, 8.3), 8.73 (1H, br d, J = 8.1), 13.18 (1H, br s)
Ia-195	180-181 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 2.27 (3H, s), 2.42 (3H, s), 4.04 (3H, s), 4.63 (2H, d, J = 6.8), 5.53 (1H, br t, J= 6.8), 5.77 (1H, s), 6.76 (1H, dd, J = 2.0, 8.3), 6.88 (1H, d, J = 2.0), 6.96 (1H, d, J = 8.3), 7.16 (1H, ddd, J = 1.2, 7.0, 8.1), 7.46 (1H, ddd, J = 1.7, 7.0, 8.5), 8.63 (1H, dd, J = 1.7, 8.1), 8.73 (1H, br d, J = 8.5), 13.28 (1H, br s)
Ia-196	169-170 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.27 (3H, s), 2.45 (3H, s), 3.23 (3H, s), 4.04 (3H, s), 4.65 (2H, d, J = 6.8), 5.52 (1H, br t, J= 6.8), 7.16 (1H, ddd, J = 1.2, 7.3, 8.1), 7.22 (1H, dd, J = 2.2, 8.6), 7.29 (1H, d, J = 2.2), 7.47 (1H, ddd, J = 1.5, 7.3, 8.1), 8.62 (1H, dd, J = 1.5, 8.1), 8.73 (1H, br d, J = 8.1), 13.21 (1H, br s)
Ia-197	176-178 °C, ^{1}H-NMR ($CDCl_3$) δ 2.45 (3H, s), 3.03 (3H, s), 3.12 (3H, s), 4.05 (3H, s), 5.18 (2H, s), 7.14-7.24 (3H, m), 7.30 (1H, d, J = 2.0), 7.38-7.51 (6H, m), 7.76 (1H, dd, J = 1.0, 8.3), 8.69 (1H, dd, J = 1.7, 8.1), 13.19 (1H, br s)
Ia-199	157-158 °C, ^{1}H-NMR ($CDCl_3$) δ 1.36 (3H, t, J = 6.7), 2.42 (3H, s), 3.11 (3H, s), 4.54 (2H, q, J = 6.7), 5.18 (2H, s), 7.14 (1H, d, J = 7.9), 7.21 (1H, dd, J = 1.8, 8.5), 7.32 (1H, d, J = 2.4), 7.37-7.49 (8H, m), 8.43-8.48 (2H, m)
Ia-200	122-123 °C, ^{1}H-NMR ($CDCl_3$) δ 1.36 (3H, t, J = 7.3), 2.39 (3H, s), 2.40 (3H, s), 4.54 (2H, q, J = 7.3), 5.11 (2H, s), 5.69 (1H, s), 6.76 (1H, dd, J = 1.8, 8.5), 6.89 (1H, d, J = 1.8), 7.00 (1H, d, J = 8.5), 7.22-7.50 (3H, m), 8.42-8.48 (2H, m)
Ia-201	147-148 °C, ^{1}H-NMR ($CDCl_3$) δ 1.36 (3H, t, J = 6.7), 2.39 (3H, s), 2.42 (3H, s), 3.10 (3H, s), 4.54 (2H, q, J = 6.7), 5.13 (2H, s), 7.14 (1H, d, J = 8.5), 7.18-7.28 (3H, m), 7.31 (1H, d, J = 1.8), 7.36 (2H, d, J = 8.5), 7.46-7.50 (3H, m), 8.43-8.48 (2H, m)
Ia-202	99-100 °C, ^{1}H-NMR ($CDCl_3$) δ 1.36 (3H, s), 1.77 (3H, s), 1.83 (3H, s), 2.39 (3H, s), 4.54 (2H, q, J = 7.3), 4.62 (2H, d, J = 6.7), 5.53 (1H, br t, J = 6.7), 5.72 (1H, s), 6.75 (1H, dd, J = 2.4, 8.5), 6.87 (1H, d, J = 2.4), 6.93 (1H, d, J = 8.5), 7.42-7.52 (3H, m), 8.42-8.50 (2H, m)
Ia-203	128-129 °C, ^{1}H-NMR ($CDCl_3$) δ 1.37 (3H, t, J = 6.7), 1.77 (3H, s), 1.82 (3H, s), 2.42 (3H, s), 3.22 (3H, s), 5.34 (2H, q, J = 6.7), 4.63 (2H, d, J = 6.7), 5.51 (1H, br t, J = 6.7), 7.06 (1H, d, J = 8.5), 7.20 (1H, dd, J = 2.4, 8.5), 7.30 (1H, d, J = 1.8), 7.45-7.49 (3H, m), 8.43-8.48 (2H, m)
Ia-206	oil, ^{1}H-NMR ($CDCl_3$) δ 1.33 (6H, d, J = 6.1), 2.38 (3H, s), 5.16 (2H, s), 5.55 (1H, sept, J = 6.1), 5.68 (1H, s), 6.75 (1H, dd, J = 1.8, 8.5), 6.89 (1H, d, J = 1.8), 6.99 (1H, d, J = 8.5), 7.36-7.48 (8H, m), 8.42-8.47 (2H, m)

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Ia-207	123-124 °C, ^{1}H-NMR ($CDCl_3$) δ 1.33 (3H, s), 1.36 (3H, s), 2.41 (3H, s), 3.11 (3H, s), 5.18 (2H, s), 5.55 (1H, sept, J = 6.1), 7.13 (1H, d, J = 8.5), 7.20 (1H, dd, J = 1.8, 8.5), 7.31 (1H, d, J = 1.8), 7.37-7.50 (8H, m), 8.42-8.46 (2H, m)
Ia-208	157-158 °C, ^{1}H-NMR ($CDCl_3$) δ 1.32 (3H, s), 1.34 (3H, s), 2.38 (3H, s), 2.40 (3H, s), 5.11 (2H, s), 5.55 (1H, sept, J = 6.1), 5.68 (1H, s), 6.75 (1H, dd, J = 2.4, 8.5), 6.88 (1H, d, J = 2.4), 6.99 (1H, d, J = 8.5), 7.24 (1H, d, J = 7.9), 7.36 (2H, d, J = 7.9), 7.45-7.52 (3H, m), 8.42-8.47 (2H, m)
Ia-209	159-160 °C, ^{1}H-NMR ($CDCl_3$) δ 1.33 (3H, s), 1.35 (3H, s), 2.39 (3H, s), 2.41 (3H, s), 3.10 (3H, s), 5.13 (2H, s), 5.55 (1H, sept, J = 6.1), 7.13 (1H, d, J = 7.9), 7.18 (1H, d, J = 1.8), 7.23 (1H, d, J = 7.3), 7.30 (1H, d, J = 1.8), 7.36 (2H, d, J = 7.9), 7.44-7.49 (3H, m), 8.42-8.46 (2H, m)
Ia-210	113-114 °C, ^{1}H-NMR ($CDCl_3$) δ 1.32 (3H, s), 1.34 (3H, s), 1.77 (3H, s), 1.83 (3H, s), 2.38 (3H, s), 4.62 (2H, d, J = 7.3), 5.49-5.59 (2H, m), 5.70 (1H, s), 6.73 (1H, dd, J = 2.4, 8.5), 6.86 (1H, d, J = 2.4), 6.92 (1H, d, J = 8.5), 7.45-7.50 (3H, m), 8.42-8.46 (2H, m)
Ia-211	128-129 °C, ^{1}H-NMR ($CDCl_3$) δ 1.33 (3H, s), 1.35 (3H, s), 1.77 (3H, s), 1.82 (3H, s), 2.41 (3H, s), 3.22 (3H, s), 4.64 (2H, d, J = 6.7), 5.49-5.60 (2H, m), 7.05 (1H, d, J = 8.5), 7.18 (1H, dd, J = 1.8, 8.5), 7.29 (1H, d, J = 2.4), 7.45-7.49 (3H, m), 8.42-8.46 (2H, m)
Ia-214	110-111 °C, ^{1}H-NMR ($CDCl_3$) δ 1.24 (3H, t, J = 7.6), 2.65 (2H, q, J = 7.6), 4.02 (3H, s), 5.16 (2H, s), 5.71 (1H, s), 6.74 (1H, dd, J = 2.0, 8.3), 6.88 (1H, d, J = 2.0), 7.01 (1H, d, J = 8.3), 7.41-7.49 (8H, m), 8.48-8.53 (2H, m)
Ia-215	161-162 °C, ^{1}H-NMR ($CDCl_3$) δ 1.25 (3H, t, J = 7.6), 2.66 (2H, q, J = 7.6), 3.11 (3H, s), 4.02 (3H, s), 5.17 (2H, s), 7.14 (1H, d, J = 8.5), 7.18 (1H, dd, J = 2.0, 8.5), 7.28 (1H, d, J = 2.0), 7.37-7.49 (8H, m), 8.49-8.53 (2H, m)
Ia-216	121-122 °C, ^{1}H-NMR ($CDCl_3$) δ 1.24 (3H, t, J = 7.6), 2.40 (3H, s), 2.65 (2H, q, J = 7.6), 4.02 (3H, s), 5.11 (2H, s), 5.70 (1H, s), 6.74 (1H, dd, J = 2.0, 8.3), 6.87 (1H, d, J = 2.0), 7.01 (1H, d, J = 8.3), 7.24 (2H, d, J = 8.1), 7.34 (2H, d, J = 8.1), 7.46-7.50 (3H, m), 8.49-8.53 (2H, m)
Ia-217	184-185 °C, ^{1}H-NMR ($CDCl_3$) δ 1.25 (3H, t, J = 7.6), 2.39 (3H, s), 2.66 (2H, q, J = 7.6), 3.10 (3H, s), 4.02 (3H, s), 5.13 (2H, s), 7.14 (1H, d, J = 8.6), 7.18 (1H, dd, J = 2.0, 8.6), 7.22 (2H, d, J = 7.8), 7.27 (1H, d, J = 2.0), 7.36 (2H, d, J = 7.8), 7.47-7.51 (3H, m), 8.49-8.53 (2H, m)
Ia-218	119-120 °C, ^{1}H-NMR ($CDCl_3$) δ 1.24 (3H, t, J = 7.6), 1.77 (3H, s), 1.83 (3H, s), 2.65 (2H, q, J = 7.6), 4.02 (3H, s), 4.62 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 5.73 (1H, s), 6.73 (1H, dd, J = 2.0, 8.3), 6.85 (1H, d, J = 2.0), 6.94 (1H, d, J = 8.3), 7.46-7.50 (3H, m), 8.49-8.53 (2H, m)
Ia-219	141-142 °C, ^{1}H-NMR ($CDCl_3$) δ 1.25 (3H, t, J = 7.6), 1.77 (3H, s), 1.82 (3H, s), 2.66 (2H, q, J = 7.6), 3.22 (3H, s), 4.02 (3H, s), 4.63 (2H, d, J = 6.6), 5.51 (1H, br t, J = 6.6), 7.07 (1H, d, J = 8.5), 7.17 (1H, dd, J = 2.0, 8.5), 7.26 (1H, d, J = 2.0), 7.46-7.50 (3H, m), 8.49-8.53 (2H, m)
Ia-222	187-189 °C, ^{1}H-NMR ($CDCl_3$) δ 5.18 (2H, s), 5.76 (1H, s), 6.93 (1H, dd, J = 2.2, 8.3), 7.04 (1H, d, J =8.6), 7.05 (1H, d, J = 2.2), 7.42-7.58 (8H, m), 8.45-8.49 (2H, m), 8.97 (1H, s)
Ia-223	163-166 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 5.21 (2H, s), 7.19 (1H, d, J = 8.5), 7.36 (1H, dd, J = 2.0, 8.5), 7.38-7.54 (9H, m), 8.45-8.49 (2H, m), 8.99 (2H, s)

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Ia-224	165-166 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.83 (3H, s), 4.65 (2H, d, J = 6.8), 5.53 (1H, t, J = 6.8), 5.77 (1H, s), 6.92 (1H, dd, J = 2.0, 8.3), 6.97 (1H, d, J = 8.3), 7.02 (1H, d, J = 2.0), 7.54-7.58 (3H, m), 8.45-8.48 (2H, m), 8.97 (1H, s)
Ia-226	118-119 °C, ^{1}H-NMR ($CDCl_3$) δ 3.87 (3H, s), 5.17 (2H, s), 5.79 (1H, s), 6.88 (1H, dd, J = 2.2, 8.3), 7.01 (1H, d, J = 8.3), 7.03 (1H, d, J = 2.2), 7.39-7.52 (8H, m), 8.48-8.51 (2H, m), 8.90 (1H, s)
Ia-227	117-118 °C, ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 3.90 (3H, s), 5.19 (2H, s), 5.79 (1H, s), 7.18 (1H, d, J = 8.6), 7.33 (1H, dd, J = 2.2, 8.3), 7.40 (1H, d, J = 2.2), 7.41-7.53 (8H, m), 8.48-8.52 (2H, m), 8.90 (1H, s)
Ia-229	92-94 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 3.87 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, t, J = 6.8), 5.78 (1H, s), 6.88 (1H, dd, J = 2.0, 8.3), 6.95 (1H, d, J = 8.3), 7.00 (1H, d, J = 2.0), 7.49-7.51 (3H, m), 8.47-8.51 (2H, m), 8.90 (1H, s)
Ia-230	134-135 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 3.23 (3H, s), 3.91 (3H, s), 4.65 (2H, d, J = 6.6), 5.49 (1H, t, J = 6.6), 7.11 (1H, d, J = 8.3), 7.32 (1H, dd, J = 2.0, 8.3), 7.37 (1H, d, J = 2.0), 7.49-7.54 (3H, m), 8.48-8.52 (2H, m), 8.90 (1H, s)
Ia-232	151-152 °C, ^{1}H-NMR ($CDCl_3$) δ 2.14 (3H, s), 3.13 (3H, s), 5.21 (2H, s), 7.19 (1H, d, J = 8.5), 7.28 (1H, dd, J = 2.2, 8.5), 7.38-7.52 (9H, m), 8.46-8.49 (2H, m), 8.70 (2H, s)
Ia-233	197-198 °C, ^{1}H-NMR ($CDCl_3$) δ 2.32 (3H, s), 2.60 (3H, s), 3.11 (3H, s), 5.19 (2H, s), 7.18 (2H, br s), 7.28 (1H, m), 7.38-7.50 (8H, s), 8.49-8.53 (2H, m)
Ia-235	184-185 °C, ^{1}H-NMR ($CDCl_3$) δ 2.23 (3H, s), 3.04 (3H, d, J = 4.6), 4.55 (1H, br q, J = 4.6), 5.17 (2H, s), 5.82 (1H, s), 6.71 (1H, dd, J = 2.0, 8.1), 6.85 (1H, d, J = 2.0), 7.04 (1H, d, J = 8.1), 7.39-7.48 (8H, m), 8.44-8.48 (2H, m)
Ia-236	204-205 °C, ^{1}H-NMR ($CDCl_3$) δ 2.23 (3H, s), 3.05 (3H, d, J = 4.6), 3.13 (3H, s), 4.51 (1H, br q, J = 4.6), 5.19 (2H, s), 7.16 (1H, dd, J = 2.0, 8.6), 7.19 (1H, d, J = 8.6), 7.25 (1H, d, J = 2.0), 7.38-7.50 (8H, m), 8.44-8.48 (2H, m)
Ia-238	oil, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.35 (3H, s), 3.99 (3H, s), 4.66 (2H, d, J = 6.7), 4.78 (1H, s), 5.51 (1H, br t, J = 6.7), 5.69 (1H, s), 6.91 (2H, d, J = 8.6), 6.95 (1H, d, J = 8.6), 8.01 (1H, dd, J = 8.6, 1.8), 8.07 (1H, d, J = 1.8)
Ia-239	189-190 °C ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 3.21 (3H, s), 3.99 (3H, s), 5.20 (2H, s), 5.70 (1H, s), 7.02 (1H, d, J = 8.6), 7.31-7.47 (9H, m), 8.03 (1H, dd, J = 8.6, 1.8), 8.10 (1H, d, J = 1.8)
Ia-240	190-192 °C, ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 3.12 (3H, s), 3.21 (3H, s), 4.00 (3H, s), 5.21 (2H, s), 7.14 (1H, d, J = 8.6), 7.28-7.49 (9H, m), 8.41 (1H, dd, J = 8.6, 2.5), 8.44 (1H, d, J = 2.5)
Ia-241	72-74 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.81 (3H, s), 2.34 (3H, s), 3.21 (3H, s), 3.24 (3H, s), 4.01 (3H, s), 4.67 (2H, d, J = 6.7), 5.50 (1H, br t, J = 6.7), 7.08 (1H, d, J = 8.6), 7.28-7.39 (4H, m), 8.39 (1H, dd, J = 8.5, 1.8), 8.42 (1H, s)
Ia-248	228-230 °C, ^{1}H-NMR ($CDCl_3$) δ 5.21 (2H, s), 7.08 (1H, d, J = 9.0), 7.38-7.56 (8H, m), 7.72-7.76 (2H, m), 7.85 and 7.88 (each 1H, Abq, J = 9.0), 8.13-8.16 (2H, m)
Ia-249	220-221 °C, ^{1}H-NMR ($CDCl_3$) δ 3.15 (3H, s), 5.23 (2H, s), 7.24 (1H, d, J = 8.8), 7.37-7.58 (8H, m), 7.89 and 7.93 (each 1H, Abq, J = 9.0), 8.07 (1H, d, J = 2.2), 8.14-8.17 (2H, m), 8.21 (1H, dd, J = 2.2, 8.8)

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Ia-252	185-186 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.82 (3H, s), 4.66 (2H, d, J = 6.8), 5.52 (1H, br t, J = 6.8), 5.66 (1H, br s), 5.78 (1H, s), 6.99-7.03 (3H, m), 7.68 (2H, d, J = 9.0), 7.72 (1H, dd, J = 2.2, 8.6), 7.82 (2H, s), 8.06 (2H, d, J = 8.8)
Ia-253	198-200 °C, ^{1}H-NMR ($CDCl_3$) δ 3.15 (3H, s), 3.21 (3H, s), 5.23 (2H, s), 7.24 (1H, d, J = 8.8), 7.38-7.46 (5H, m), 7.47 (2H, d, J = 9.0), 7.91 (2H, s), 8.07 (1H, d, J = 2.2), 8.19 (1H, dd, J = 2.2, 8.8), 8.22 (2H, d, J = 9.0)
Ia-254	192-193 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.82 (3H, s), 3.21 (3H, s), 3.25 (3H, s), 4.69 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.18 (1H, d, J = 8.8), 7.48 (2H, d, J = 9.0), 7.90 (2H, s), 8.03 (1H, d, J = 2.2), 8.22 (1H, dd, J = 2.2, 8.8), 8.23 (2H, d, J = 8.8)
Ia-255	233-235 °C, ^{1}H-NMR ($CDCl_3$) δ 3.89 (3H, s), 5.21 (2H, s), 5.75 (1H, s), 7.05 (2H, d, J = 8.8), 7.08 (1H, d, J = 9.0), 7.37-7.47 (5H, m), 7.73-7.75 (2H, m), 7.81 and 7.83 (each 1H, ABq, J = 9.3), 8.12 (2H, d, J = 8.8)
Ia-256	212-215 °C, ^{1}H-NMR ($CDCl_3$) δ 3.15 (3H, s), 3.89 (3H, s), 5.23 (2H, s), 7.07 (2H, d, J = 9.0), 7.23 (1H, d, J = 8.8), 7.37-7.50 (5H, m), 7.84 and 7.86 (each 1H, ABq, J = 9.3), 8.05 (1H, d, J = 2.0), 8.12 (2H, d, J = 9.0), 8.18 (1H, dd, J = 2.0, 8.8)
Ia-257	171-174 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 3.89 (3H, s), 4.66 (2H, d, J =6.8), 5.52 (1H, br t, J = 6.8), 5.78 (1H, s), 7.01 (1H, d, J = 8.3), 7.05 (2H, d, J = 8.8), 7.69 (1H, d, J = 2.2), 7.73 (1H, dd, J = 2.2, 8.3), 7.81 and 7.82 (each 1H, ABq, J = 9.0), 8.11 (2H, d, J = 8.8),
Ia-258	197-199 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.82 (3H, s), 3.25 (3H, s), 3.90 (3H, s), 4.68 (2H, d, J =6.8), 5.51 (1H, br t, J = 6.8), 7.06 (2H, d, J = 9.0), 7.17 (1H, d, J = 8.8), 7.84 and 7.85 (each 1H, ABq, J = 9.3), 8.00 (1H, d, J = 2.2), 8.12 (2H, d, J = 9.0), 8.20 (1H, dd, J = 2.2, 8.8)
Ia-269	198-199 °C, ^{1}H-NMR ($CDCl_3$) δ 4.83 (1H, br s), 5.14 (2H, s), 5.69 (1H, s), 6.85 (2H, d, J = 8.8), 6.92 (1H, d, J = 8.3), 7.09 (1H, dd, J = 2.2, 8.3), 7.13 and 7.14 (each 1H, ABq, J = 3.9), 7.23 (1H, d, J = 2.2), 7.38-7.45 (5H, m), 7.49 (2H, d, J = 8.8)
Ia-271	167-168 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 4.60 (2H, d, J = 6.8), 4.79 (1H, s), 5.50 (1H, br t, J =6.8), 5.71 (1H, s), 6.85 (2H, d, J = 8.8), 6.87 (1H, d, J =8.3), 7.09 (1H, dd, J = 2.2, 8.3), 7.12 and 7.14 (each 1H, ABq, J = 3.7), 7.20 (1H, d, J = 2.2), 7.50 (2H, d, J = 8.8)
Ia-272	162-164 °C, ^{1}H-NMR ($CDCl_3$) δ 3.12 (3H, s), 3.17 (3H, s), 5.16 (2H, s), 7.08 (1H, d, J =8.6), 7.21 (1H, d, J = 3.7), 7.25 (1H, d, J = 3.7), 7.31 (2H, d, J = 8.8), 7.39-7.44 (5H, m), 7.48 (1H, dd, J = 2.2, 8.6), 7.57 (1H, d, J = 2.2), 7.64 (2H, d, J = 8.8)
Ia-273	128-129 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.80 (3H, s), 3.17 (3H, s), 3.23 (3H, s), 4.62 (2H, d, J = 6.8), 5.48 (1H, br t, J =6.8), 7.02 (1H, d, J =8.5), 7.20 (1H, d, J = 3.9), 7.25 (1H, d, J = 3.9), 7.31 (2H, d, J = 8.8), 7.48 (1H, dd, J = 2.2, 8.5), 7.56 (1H, d, J = 2.2), 7.64 (2H, d, J = 8.8)
Ia-275	165-166 °C, ^{1}H-NMR ($CDCl_3$) δ 5.14 (4H, s), 5.69 (2H, s), 6.92 (2H, d, J = 8.3), 7.09 (2H, dd, J = 2.2, 8.3), 7.14 (2H, s), 7.22 (2H, d, J = 2.2), 7.37-7.44 (10H, m)
Ia-280	178-179 °C, ^{1}H-NMR ($CDCl_3$) δ 2.31 (3H, s), 3.11 (3H, s), 4.82 (1H, s), 5.16 (2H, s), 6.84 (2H, d, J = 8.8), 7.01 (1H, s), 7.10 (1H, d, J = 8.6), 7.34-7.48 (9H, m)

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Ia-281	128-129 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 2.31 (3H, s), 4.61 (2H, d, J = 6.8), 4.81 (1H, s), 5.51 (1H, br t, J = 6.8), 5.72 (1H, s), 6.83 (2H, d, J = 8.8), 6.90 (1H, d, J = 8.3), 6.96 (1H, dd, J = 2.2, 8.3), 7.00 (1H, s), 7.08 (1H, d, J = 2.2), 7.47 (2H, d, J = 8.8)
Ia-282	133-134 °C, ^{1}H-NMR ($CDCl_3$) δ 2.33 (3H, s), 3.12 (3H, s), 3.17 (3H, s), 5.17 (2H, s), 7.11 (1H, d, J = 8.6), 7.12 (1H, s), 7.30 (2H, d, J = 8.8), 7.35-7.48 (7H, m), 7.61 (2H, d, J = 8.8)
Ia-283	86-87 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.33 (3H, s), 3.17 (3H, s), 3.22 (3H, s), 4.63 (2H, d, J = 6.8), 5.49 (1H, br t, J = 6.8), 7.05 (1H, d, J = 8.6), 7.11 (1H, s), 7.29 (2H, d, J = 8.6), 7.36 (1H, dd, J = 2.2, 8.6), 7.44 (1H, d, J = 2.2), 7.61 (2H, d, J = 8.8)
Ia-309	128-129 °C, ^{1}H-NMR ($CDCl_3$) δ 2.31 (3H, s), 3.64 (3H, s), 5.15 (2H, s), 5.70 (1H, s), 6.92 (1H, dd, J = 2.0, 8.3), 6.98 (1H, d, J = 8.3), 7.07 (1H, d, J = 2.0), 7.28 (1H, br t, J = 7.6), 7.38-7.47 (7H, m), 7.71 (2H, br d, J = 7.6)
Ia-310	132-133 °C, ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 3.11 (3H, s), 3.65 (3H, s), 5.16 (2H, s), 7.13 (1H, d, J = 8.5), 7.29-7.48 (m 10H), 7.70 (2H, br d, J = 7.6)
Ia-311	148-149 °C, ^{1}H-NMR ($CDCl_3$) δ 2.30 (3H, s), 2.39 (3H, s), 3.64 (3H, s), 5.10 (2H, s), 5.69 (1H, s), 6.92 (1H, dd, J = 2.0, 8.3), 6.99 (1H, d, J = 8.3), 7.06 (1H, d, J = 2.0), 7.23 (2H, d, J = 8.1), 7.30 (1H, m), 7.33 (2H, d, J = 8.1), 7.43 (2H, br t, J = 8.1), 7.68-7.72 (2H, m)
Ia-312	146-147 °C, ^{1}H-NMR ($CDCl_3$) δ 2.33 (3H, s), 2.38 (3H, s), 3.11 (3H, s), 3.65 (3H, s), 5.16 (2H, s), 7.13 (1H, d, J = 8.6), 7.22 (2H, d, J = 8.1), 7.29-7.47 (7H, m), 7.68-7.72 (2H, m)
Ia-313	78-79 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.33 (3H, s), 3.22 (3H, s), 3.65 (3H, s), 4.62 (2H, d, J= 6.8), 5.50 (1H, br t, J = 6.8), 7.06 (1H, d, J = 8.6), 7.29-7.47 (5H, m), 7.68-7.72 (2H, m)
Ia-314	120-121 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.30 (3H, s), 3.64 (3H, s), 4.61 (2H, d, J= 6.8), 5.52 (1H, br t, J = 6.8), 5.72 (1H, s), 6.91 (2H, br s), 7.04 (1H, br s), 7.27 (1H, br t, J = 7.3), 7.43 (2H, br t, J = 8.3), 7.70-7.73 (2H, m)
Ia-315	136-137 °C, ^{1}H-NMR ($CDCl_3$) δ 2.31 (3H, s), 3.62 (3H, s), 3.84 (3H, s), 5.16 (2H, s), 5.71 (1H, s), 6.91-7.01 (4H, m), 7.07 (1H, d, J = 1.8), 7.37-7.48 (5H, m), 7.61 (2H, d, J=8.9)
Ia-316	120-121 °C, ^{1}H-NMR ($CDCl_3$) δ 2.32 (3H, s), 3.11 (3H, s), 3.63 (3H, s), 3.84 (3H, s), 5.16 (2H, s), 6.96 (2H, d, J= 8.9), 7.13 (1H, d, J= 6.8), 7.32-7.49 (7H, m), 7.59 (2H, d, J=8.9)
Ia-317	130-131 °C, ^{1}H-NMR ($CDCl_3$) δ 2.30 (3H, s), 2.39 (3H, s), 3.62 (3H, s), 3.84 (3H, s), 5.10 (2H, s), 5.70 (1H, s), 6.89-7.00 (2H, m), 6.96 (2H, d, J = 9.2), 7.06 (1H, d, J= 1.8), 7.23 (2H, d, J = 7.9), 7.34 (2H, d, J = 7.9), 7.57 (2H, d, J = 9.2)
Ia-318	145-146 °C, ^{1}H-NMR ($CDCl_3$) δ 2.33 (3H, s), 2.38 (3H, s), 3.10 (3H, s), 3.63 (3H, s), 3.85 (3H, s), 5.11 (2H, s), 6.97 (2H, d, J = 8.5), 7.12 (1H, d, J = 8.5), 7.22 (2H, d, J = 7.9), 7.34 (1H, d, J= 8.5), 7.35 (2H, d, J = 7.9), 7.46 (1H, d, J = 1.8), 7.57 (2H, d, J = 8.5)
Ia-319	113-114 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 2.30 (3H, s), 3.62 (3H, s), 3.84 (3H, s), 4.60 (2H, d, J = 6.7), 5.52 (1H, br t, J = 6.7), 6.91 (2H, d, J = 1.2), 6.96 (2H, d, J = 9.2), 7.04 (1H, s), 7.58 (2H, d, J= 9.2)

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Ia-320	66-67 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.32 (3H, s), 3.22 (3H, s), 3.63 (3H, s),3.85 (3H, s), 4.62 (2H, d, J = 6.1), 5.50 (1H, br t, J = 6.1), 6.97 (2H, d, J = 8.5), 7.05 (1H. d, J = 8.5), 7.34 (1H, dd, J = 1.8, 8.5), 7.44 (1H. d. J= 1.8), 7.57 (2H. d. J = 8.5)
Ia-322	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s),2.24 (3H, s), 3.44 (1H, br). 3.84 (3H, s), 4.60 (2H, d, J = 6.7), 5.51 (1H, br t, J = 6.7), 6.78-6.94 (5H, m), 7.33 (2H, d, J = 8.5)
Ia-323	oil, ^{1}H-NMR ($CDCl_3$) δ 0.96 (3H, t, J = 7.3), 2.27 (3H, s), 3.82 (3H, s), 4.06 (2H, q, J = 7.3), 5.13 (2H, s), 6.18 (1H, dd, J = 1.8, 7.9), 6.91-6.97 (4H, m), 7.32-7.45 (7H, m)
Ia-324	108-109 °C, ^{1}H-NMR ($CDCl_3$) δ 0.97 (3H, t, J = 7.3), 2.28 (3H, s). 3.12 (3H, s), 3.85 (3H, s), 4.07 (2H, q, J = 7.3), 5.17 (2H, s), 6.96 (1H, d, J = 6.7), 7.11 (1H, d, J = 8.5). 7.24-7.49 (9H, m)
Ia-325	oil, ^{1}H-NMR ($CDCl_3$) δ 0.99 (3H, t, J = 7.3), 1.76 (3H, s), 1.82 (3H, s), 2.28.(3H, s), 3.84., (3H, s), 4.07 (2H, q, J = 7.3), 4.61 (2H, br d, J = 6.7), 5.51 (1H, br t, J = 6.7), 5.78 (1H, d, J = 1.8), 6.82 (1H, dd, J = 1.8, 8.5), 6.89-6.98 (4H, m), 7.36 (2H, d, J = 8.5)
Ia-326	85-86 °C, ^{1}H-NMR ($CDCl_3$) δ 0.99 (3H, t, J = 7.3), 1.76 (3H, s), 1.81 (3H, s),2.28 (3H, s), 3.22 (3H, s),3.85 (3H, s), 4.07 (2H. q, J = 7.3), 4.63 (2H, d, J = 6.7), 5.50 (1H, br t, J = 6.7), 6.96 (2H, d, J = 8.6), 7.04 (1H, d, J = 8.6), 7.24-7.29 (1H, m), 7.33-7.37 (3H, m)
Ia-328	140-141 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s),2.34 (3H, s), 3.85 (3H, s), 4.52 (2H, d, J = 3.1), 4.62 (2H, d, J = 6.7), 5.52 (1H, br t, J = 6.7), 5.78 (1H, s). 6.84-7.02 (5H. m), 7.58 (2H, d, J = 8.6)
Ia-334	136-137 °C, ^{1}H-NMR ($CDCl_3$) δ 2.13 (3H, s), 3.80 (3H, s), 5.18 (2H, s), 5.85 (1h, s), 6.83 (1H, dd, J = 2.0, 8.3), 6.96 (1H, d, J = 2.0). 7.04 (1H, d, J = 8.3). 7.32-7.46 (8H. m), 7.69-7.73 (2H, m)
Ia-335	165-165.5 °C, ^{1}H-NMR ($CDCl_3$) δ 2.15 (3H, s), 3.13 (3H, s), 3.82 (3H, s), 5.20 (2H, s), 7.19 (1H, d, J =8.3), 7.27 (1H, dd, J = 2.2, 8.3), 7.33 (1H, m), 7.35 (1H, d, J = 2.2), 7.38-7.50 (7H. m), 7.67-7.71 (2H, m)
Ia-336	143-144 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.83 (3H, s), 2.14 (3H, s), 3.80 (3H, s), 4.64 (2H, d, J = 6.8), 5.53 (1H, br t, J = 6.8), 5.84 (1H, s), , 6.82 (1H, dd, J = 2.2, 8.3), 6.93 (1H, d, J = 2.2), 6.97 (1H, d, J = 8.3), 7.32 (1H, m), 7.43 (2H. m). 7.69-7.73 (2H, m)
Ia-337	126.5-127.5 °C, ^{1}H-NMR ($CDCl_3$) δ 1.78 (3H, s), 1.83 (3H, s), 2.15 (3H, s), 3.24 (3H, s), 3.82 (3H, s), 4.66 (2H. d, J = 6.8), 5.51 (1H. br t, J = 6.8), 7.12 (1H, d, J = 8.5), 7.26 (1H. dd, J = 2.2, 8.5), 7.32 (1H, m), 7.33 (1H, d, J = 2.2). 7.43 (2H. m), 7.67-7.71 (2H. m)
Ia-338	167-168 °C ^{1}H-NMR ($CDCl_3$) δ 5.17 (2H, s), 5.75 (1H, s), 6.99 (1H, d, J = 8.6), 7.22 (1H, dd, J = 2.4, 8.6), 7.32 (2H, s). 7.33-7.52 (8H, m), 8.06-8.11 (2H, m)
Ia-339	149-150 °C ^{1}H-NMR ($CDCl_3$) δ 3.13 (3H, s), 5.18 (2H, s), 7.14 (1H, d, J = 8.5), 7.37-7.50 (8H. m), 7.60 (1H, dd, J = 1.8, 8.5), 7.68 (1H, d, J = 1.8), 8.07-8.12 (2H. m)
Ia-340	184-186 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 5.12 (2H, s), 5.77 (1H, s), 6.99 (1H. d. J = 8.6). 7.19-7.34 (7H. m). 7.40-7.52 (3H. m). 8.05-8.13 (2H. m)
Ia-341	175-176 °C. ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 3.12 (3H, s), 5.14 (2H, s), 7.14 (1H, d. J = 8.5). 7.22 (2H. d, J = 7.9), 7.34 (2H. d, J = 7.9), 7.37 (1H, s), 7.47 (2H, d, J = 1.8), 7.49 (1H, d, J = 2.4). 7.60 (1H. dd, J = 2.4, 8.5), 8.06-8.12 (2H. m)

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Ia-342	131-132 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 4.63 (2H, d, J = 6.7), 5.50 (1H, br t, J = 6.7), 5.78 (1H, s), 6.92 (1H, d, J = 8.5), 7.22 (1H, dd, J = 2.4, 8.5), 7.30-7.32 (2H, m), 7.43-7.51 (3H, m), 8.07-8.11 (2H, m)
Ia-343	126-127 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 3.25 (3H, s), 4.64 (2H, d, J = 6.7), 5.49 (1H, br t, J = 6.7), 7.07 (1H, d, J = 8.6), 7.37 (1H, s), 7.45-7.53 (3H, m), 7.60 (1H, dd, J = 1.8, 8.6), 7.66 (1H, d, J = 2.4), 8.08-8.12 (2H, m)
Ia-348	150-151 °C, ^{1}H-NMR ($CDCl_3$) δ 3.85 (3H, s), 5.16 (2H, s), 5.71 (1H, s), 6.98 (4H, d, J = 8.9), 7.31-7.46 (6H, m), 7.82 (1H, s), 8.04 (2H, d, J = 8.9)
Ia-349	112-113 °C, ^{1}H-NMR ($CDCl_3$) δ 3.12 (3H, s), 3.88 (3H, s), 5.16 (2H, s), 6.99 (2H, d, J = 9.2), 7.12 (1H, d J = 8.8), 7.33-7.48 (5H, m), 7.73 (1H, dd J = 8.3, 1.8), 7.74 (1H, s), 7.87 (1H, s), 8.04 (2H, d, J = 9.2)
Ia-350	137-138 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.81 (3H, s), 3.87 (3H, s), 4.60 (2H, d, J = 6.8), 5.49 (1H, t, J = 6.8), 5.70 (1H, s), 6.91 (1H, d, J = 9.2), 6.98 (2H, d, J = 9.1), 7.32-7.35 (2H, m), 7.82 (1H, s), 8.04 (2H, d, J = 9.1)
Ia-351	127-128 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.81 (3H, s), 3.23 (3H, s), 3.87 (3H, s), 4.63 (2H, d, J = 6.8), 5.48 (1H, t, J = 6.8), 6.98 (2H, d, J = 9.1), 7.05 (1H, d, J = 9.1), 7.71-7.75 (2H, m), 7.85 (1H, s), 8.04 (2H, d, J = 9.1)
Ia-352	99-100 °C, ^{1}H-NMR ($CDCl_3$) δ 2.58 (3H, s), 3.83 (3H, s), 5.17 (2H, s), 5.71 (1H, s), 6.93-7.01 (3H, m), 7.23 (1H, d, J = 1.9), 7.32 (1H, d, J = 1.9), 7.34-7.44 (5H, m), 8.01 (2H, d, J = 9.1)
Ia-353	159-160 °C, ^{1}H-NMR ($CDCl_3$) δ 2.57 (3H, s), 3.11 (3H, s), 3.86 (3H, s), 5.17 (2H, s), 6.97 (2H, d, J = 9.1), 7.13 (1H, d, J = 8.5), 7.35-7.47 (5H, m), 7.65 (2H, d, J = 9.1) 7.99 (2H, d, J = 9.1)
Ia-354	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.16 (3H, s), 2.57 (3H, s), 3.86 (3H, s), 4.61 (2H, d, J = 6.7), 5.50 (1H, br t, J = 6.7), 5.71 (1H, s), 6.94 (2H, d, J = 7.3), 6.97 (1H, d, J = 8.6), 7.23 (1H, dd, J = 8.6, 1.8), 7.28 (1H, d, J = 1.8), 8.00 (2H, d, J = 7.3)
Ia-355	130-131 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.57 (3H, s), 3.21 (3H, s), 3.87 (3H, s), 4.63 (2H, d, J = 6.7), 5.49 (1H, t, J = 6.7), 6.97 (2H, d, J = 6.7), 7.07 (1H, d, J = 9.1) 7.62-7.67 (2H, m), 7.99 (2H, d, J = 9.1)
Ia-356	mp 91.5-92.5 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.76 (s, 3H), 1.77 (s, 3H), 1.80 (s, 3H), 2.34 (s, 3H), 2.54 (s, 3H), 3.74 (d, J = 6.6 Hz, 2H), 4.63 (d, J = 6.6 Hz, 2H), 5.37 (br t, J = 6.6 Hz, 1H), 5.54 (br t, J = 6.6 Hz, 1H),6.68 (d, J = 8.5 Hz, 2H), 7.04 (t, J = 8.5 Hz, 1H), 7.19 (d, J = 8.5 Hz, 2H), 7.27 (br d, J = 8.5 Hz, 1H), 7.33(dd, J = 2.0, 12.0 Hz, 1H) 7.39 (s, 1H)
Ia-357	mp 136-136.5 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.76 (s, 3H), 1.77 (s, 3H), 1.82 (s, 3H), 2.37 (s, 3H), 2.52 (s, 3H), 3.74 (d, J = 6.6 Hz, 2H), 4.64 (d, J = 6.8 Hz, 2H), 5.35 (br t, J = 6.6 Hz, 1H), 5.55 (br t, J = 6.8 Hz, 1H), 6.68 (d, J = 8.8 Hz, 2H), 7.01-7.12 (m, 3H), 7.35 (s, 1H), 7.43 (d, J = 8.8 Hz, 2H)

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Ib-3	157-158 °C, ($CDCl_3$) δ 1.78 (3H, s), 1.82 (3H, s), 3.56 (3H, s), 3.80 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, t, J = 6.8), 5.69 (1H, s), 5.84 (1H, s), 6.95 (4H, d, J = 2.4), 7.05 (1H, s), 7.76 (1H, td, J = 7.8, 1.8), 7.94 (1H, d, J = 7.8), 8.75 (1H, dd, J = 4.9, 2.4)
Ib-8	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.79 (3H, s), 2.29 (3H, s), 2.37 (3H, s), 3.89 (3H, s), 4.64 (2H, d, J = 6.7), 5.57 (1H, br t, J = 6.7), 6.85-6.96 (3H, m), 7.16 (1H, s), 7.22-7.27 (1H, m), 7.33 (1H, s), 7.46 (1H, d, J = 7.9), 7.75 (1H, dt, J = 1.8, 7.9), 8.71 (1H, dd, J = 4.9, 1.8).
Ib-11	112-113 °C, ^{1}H-NMR ($CDCl_3$) δ 1.45 (3H, s), 1.73 (3H, s), 1.76 (3H, s), 1.81 (3H, s), 2.67 (3H, s), 3.25 (3H, s), 3.68 (3H, s), 3.85 (3H, s), 4.39 (2H, d, J = 7.3), 4.64 (2H, d, J = 6.8), 5.27 (1H, t, J = 7.3), 5.49 (1H, t, J = 6.8), 7.09 (1H, d, J = 8.5), 7.33-7.39 (2H, m), 7.49 (1H, s), 7.60 (1H, dd, J = 8.5, 2.5), 8.16 (1H, d, J = 8.5), 8.56 (1H, d, J = 1.8)
Ib-12	139-141 °C, ^{1}H-NMR ($CDCl_3$) δ 2.66 (3H, s), 3.12 (3H, s), 3.64 (3H, s), 3.82 (3H, s), 3.84 (2H, brs), 5.18 (2H, s), 7.05 (1H, dd, J = 8.5, 3.0), 7.14 (1H, d, J = 8.5), 7.32-7.48 (8H, m), 7.86 (1H, d, J = 8.5), 8.21 (1H, d, J = 3.0)
Ib-13	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.79 (3H, s), 2.28 (3H, s), 2.36 (3H, s), 3.73 (2H, br s), 3.88 (3H, s), 4.63 (2H, d, J = 6.8), 5.57 (1H, br t, J = 6.8), 6.84-6.95 (3H, m), 7.06 (1H, dd, J = 2.9, 8.3), 7.14 (1H, s), 7.25 (1H, dd, J = 0.5, 8.3), 8.20 (1H, dd, J = 0.5, 2.9)
Ib-15	157-158 °C, ^{1}H-NMR ($CDCl_3$) δ 2.30 (3H, s), 2.35 (3H, s), 2.99 (6H, s), 3.70 (2H, brs), 6.79 (2H, d, J = 8.9), 7.05 (1H, dd, J = 8.5, 2.4), 7.13 (1H, s), 7.24-7.29 (4H, m), 8.20 (1H, d, J = 2.4)
Ib-16	164-165 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.78 (3H, s), 1.81 (3H, s), 3.56 (3H, s), 3.77 (2H, d, J = 6.8), 3.79 (3H, s), 4.61 (2H, d, J = 7.3), 5.34 (1H, t, J = 6.8), 5.53 (1H, t, J = 7.3), 5.68 (1H, s), 5.85 (1H, s), 6.92-6.98 (4H, m), 7.05 (1H, s), 7.77 (1H, d, J = 9.2), 8.14 (1H, d, J = 3.1)
Ib-17	oil, ^{1}H-NMR ($CDCl_3$) δ 1.75 (6H, s), 1.78 (3H, s), 1.79 (3H, s), 2.29 (3H, s), 2.37 (3H, s), 3.76 (2H, d, J = 6.6), 3.88 (3H, s), 4.63 (2H, d, J = 6.8), 5.35 (1H, br t, J = 6.6), 5.57 (1H, br t, J = 6.8), 6.84-6.98 (4H, m), 7.13 (1H, s), 7.27 (1H, d, J = 8.6), 7.31 (1H, s), 8.13 (1H, d, J = 2.4)
Ib-20	116-117 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.78 (3H, s), 2.30 (3H, s), 2.36 (3H, s), 2.99 (6H, s), 3.75 (2H, d, J = 6.8), 5.35 (2H, t, J = 6.8), 6.90 (2H, d, J = 8.5), 6.94 (1H, dd, J = 8.5, 3.1), 7.13 (1H, s), 7.22-7.29 (4H, m), 8.13 (1H, d, J = 2.4)
Ib-21	233-234 °C, ^{1}H-NMR ($CDCl_3$) δ 2.65 (3H, s), 3.13 (3H, s), 3.69 (3H, s), 3.84 (3H, s), 5.19 (2H, s), 7.15 (1H, d, J = 8.5), 7.33-7.48 (8H, m), 8.10 (1H, brs), 8.16 (2H, d, J = 1.4), 8.88 (1H, s)
Ib-23	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.30 (3H, s), 2.37 (3H, s), 3.88 (3H, s), 4.63 (2H, d, J = 6.6), 5.56 (1H, br t, J = 6.6), 6.84-6.96 (3H, m), 7.17 (1H, s), 7.32 (1H, s), 7.53 (1H, d, J = 8.5), 8.25 (1H, dd, J = 2.7, 8.5), 8.76 (1H, d, J = 2.7)
Ib-25	178-180 °C, ^{1}H-NMR ($CDCl_3$) δ 2.32 (3H, s), 2.37 (3H, s), 3.00 (6H, s), 6.80 (2H, d, J = 9.1), 7.17 (1H, s), 7.25 (2H, d, J = 8.5), 7.32 (1H, s), 7.53 (1H, d, J = 8.5), 8.05 (1H, brs), 8.24 (1H, dd, J = 8.5, 2.5), 8.74 (1H, d, J = 2.5)
Ib-35	219-221 °C, ^{1}H-NMR ($CDCl_3$) δ 3.00 (6H, s), 3.09 (3H, s), 3.84 (3H, s), 3.86 (3H, s), 6.50 (1H, br), 6.80 (2H, d, J = 9.0), 6.99 (1H, s), 7.51 (2H, d, J = 9.0), 7.52 (1H, s), 7.71 (1H, dd, J = 2.7, 8.7), 8.02 (1H, d, J = 8.7), 8.52 (1H, d, J = 2.7)

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Ib-37	187-190 °C, ^{1}H-NMR ($CDCl_3$) δ 2.32 (3H, s), 2.36 (3H, s), 3.00 (6H, s), 3.10 (3H, s), 6.66 (1H, brs), 6.80 (2H, d, J = 9.2), 7.16 (1H, s), 7.18-7.32 (3H, m), 7.48 (1H, d, J = 8.5), 7.76 (1H, dd, J = 8.5, 3.1), 8.51 (1H, d, J = 3.1)
Ib-39	169-170 °C, ^{1}H-NMR ($CDCl_3$) δ 2.67 (3H, s), 3.06 (6H, s), 3.13 (3H, s), 3.65 (3H, s), 3.83 (3H, s), 5.18 (2H, s), 7.04 (1H, dd, J = 8.5, 3.0), 7.13 (1H, d, J = 8.5), 7.32-7.47 (8H, m), 7.93 (1H, d, J = 8.5), 8.25 (1H, d, J = 3.0)
Ib-40	205-206 °C, ^{1}H-NMR ($CDCl_3$) δ 1.73 (3H, s), 1.81 (3H, s), 3.06 (6H, s), 3.59 (3H, s), 3.80 (3H, s), 4.61 (2H, d, J = 6.8), 5.51 (1H, t, J = 6.8), 5.70 (1H, brs), 5.87 (1H, brs), 6.92 (3H, s), 7.04-7.10 (2H, m), 7.82 (1H, d, J = 8.5), 8.24 (1H, d, J = 1.8)
Ib-41	157-158 °C, ^{1}H-NMR ($CDCl_3$) δ 1.74 (3H, s), 1.81 (3H, s), 2.70 (3H, s), 3.05 (6H, s), 3.21 (3H, s), 3.61 (3H, s), 3.81 (3H, s), 4.61 (2H, d, J = 6.8), 5.51 (1H, t, J = 6.8), 7.03-7.11 (2H, m), 7.33 (1H, dd, J = 8.5, 2.0), 7.38 (1H, d, J = 2.0), 7.41 (1H, s), 7.92 (1H, d, J = 8.5), 8.24 (1H, d, J = 2.0)
Ib-44	117-118 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.80 (3H, s), 2.29 (3H, s), 2.36 (3H, s), 3.04 (6H, s), 3.89 (3H, s), 4.63 (2H, d, J = 6.8), 5.57 (1H, br t, J = 6.8), 6.86-6.95 (3H, m), 7.08 (1H, dd, J = 2.9, 8.6), 7.14 (1H, s), 7.31 (1H, s), 7.32 (1H, d, J = 8.6), 8.22 (1H, d, J = 2.9)
Ib-46	216-218 °C, ^{1}H-NMR ($CDCl_3$) δ 3.64 (3H, s), 3.82 (3H, s), 5.16 (2H, s), 5.73 (1H, s), 5.77 (1H, s), 6.94 (1H, dd, J = 8.5, 2.4), 7.07 (1H, s), 7.09 (2H, d, J = 6.7), 7.36-7.47 (5H, m), 8.25 (1H, d, J = 8.5), 8.54(1H, dd, J = 8.5, 2.4), 9.54 (1H, d, J = 2.4)
Ib-47	159-160 °C, ^{1}H-NMR ($CDCl_3$) δ 2.63 (3H, s), 3.14 (3H, s), 3.73 (3H, s), 3.86 (3H, s), 5.19 (2H, s), 7.16 (2H, d, J = 8.5), 7.29-7.48 (6H, m), 7.56 (1H, s), 8.35 (1H, d, J = 9.1), 8.54 (1H, dd, J = 9.1, 2.5), 9.54 (1H, d, J = 2.5)
Ib-49	194-195 °C, ^{1}H-NMR ($CDCl_3$) δ 2.35 (3H, s), 2.41 (3H, s), 3.01 (6H, s), 6.80 (2H, d, J = 9.1), 7.20 (1H, s), 7.26 (2H, d, J = 9.1), 7.37 (1H, s), 7.67 (1H, d, J = 9.1), 8.53 (1H, dd, J = 9.1, 2.5), 9.53 (1H, d, J = 2.4)
Ib-51	126-127 °C, ^{1}H-NMR ($CDCl_3$) δ 2.25 (3H, s), 2.32 (3H, s), 3.01 (6H, s), 6.80 (2H, d, J = 8.5), 7.09 (1H, s), 7.18 (1H, s), 7.22-7.29 (2H, m), 7.38 (1H, d, J = 8.5), 7.66 (1H, dd, J = 8.0, 2.4), 8.76 (1H, d, J = 2.4)
Ib-54	162-163 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 3.48 (3H, s), 3.76 (3H, s), 4.62 (2H, d, J = 6.8), 5.53 (1H, t, J = 6.8), 5.72 (1H, s), 5.81 (1H, s), 6.47 (1H, s), 6.94-6.99 (2H, m), 7.04 (1H, s), 7.37-7.68 (4H, m), 7.99 (1H, dd, J = 6.1, 1.8) 8.62 (1H, d, J = 4.9), 8.89 (1H, d, J = 1.8),
Ib-58	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.80 (3H, s), 2.28 (3H, s), 2.30 (3H, s), 3.89 (3H, s), 4.64 (2H, d, J = 6.7), 5.57 (1H, br t, J = 6.7), 6.86-6.96 (3H, m), 7.13 (1H, s), 7.19 (1H, s), 7.36 (1H, dd, J = 8.2, 4.9), 7.70 (1H, dt, J = 1.8, 8.2), 8.60 (1H, dd, J = 4.9, 1.8), 8.65 (1H, d, J = 1.8)
Ib-65	180-181 °C, ^{1}H-NMR ($CDCl_3$) δ 2.28 (3H, s), 2.31 (3H, s), 3.00 (6H, s), 4.45 (2H, br s), 6.57 (1H, d, J = 9.1), 6.80 (2H, d, J = 9.1), 7.09 (1H, s), 7.15 (1H, s), 7.25 (2H, dd, J = 8.0, 2.4), 7.47 (1H, dd, J = 8.5, 2.4), 8.10 (1H, d, J = 2.4)
Ib-67	185-188 °C ^{1}H-NMR ($CDCl_3$) δ 2.07 (3H, s), 2.21 (3H, s), 2.28 (3H, s), 3.00 (6H, s), 4.41 (2H, brs), 6.41 (1H, d, J = 7.8), 6.80 (2H, d, J = 9.2), 6.97 (1H, s), 7.12 (1H, s), 7.22-7.29 (3H, m)

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Ib-69	mp 184-185.5 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.77 (s, 3H), 2.29 (s, 3H), 2.30 (s, 3H), 3.00 (s, 6H), 3.90 (br t, J = 5.6 Hz, 2H), 4.45 (br s, 1H), 5.37 (br t, J = 5.6 Hz, 1H), 6.45 (dd, J = 0.5, 8.5 Hz, 1H), 6.80 (d, J = 8.8 Hz, 2H), 7.10 (s, 1H), 7.15 (s, 1H), 7.27 (d, J = 8.8 Hz, 2H), 7.47 (dd, J = 2.4, 8.5 Hz, 1H), 8.13 (dd, J = 0.5, 2.4 Hz, 1H)
Ib-71	118-119 °C, ^{1}H-NMR ($CDCl_3$) δ 1.73 (3H, s), 1.76 (3H, s). 2.08 (3H, s), 2.20 (3H, s), 2.28 (3H, s),3.00 (6H, s), 3.83 (2H, d, J = 6.8), 4.81 (1H, brs), 5.35 (1H, t, J = 6.7), 6.29 (1H, d, J = 8.5), 6.79 (2H, d, J = 8.5), 6.97 (1H, s), 7.12 (1H, s), 7.24-7.29 (3H, m)
Ib-73	196-197 °C, ^{1}H-NMR ($CDCl_3$) δ 2.25 (3H, s), 2.27 (3H, s), 2.32 (3H, s), 3.02 (6H, s), 6.86 (2H, d, J = 8.5), 7.11 (1H, s), 7.17 (1H, s), 7.28 (2H, d, J = 8.5), 7.75 (1H, dd, J = 8.0, 2.4), 8.19 (1H, br s), 8.25-8.28 (2H, m)
Ib-75	169-171 °C, ^{1}H-NMR ($CDCl_3$) δ 2.05 (3H, s), 2.22 (3H, s), 2.27 (3H, s), 2.29 (3H, s), 3.01 (6H, s), 6.80 (2H, d, J = 8.5), 6.97 (1H, s), 7.14 (1H, s), 7.28 (1H, d, J = 8.5), 7.49 (1H, d, J = 8.5), 7.92 (1H, brs), 8.05 (1H, d, J = 8.5)
Ib-79	149-152 °C, ^{1}H-NMR ($CDCl_3$) δ 2.07 (3H, s), 2.28 (3H, s), 2.29 (3H, s), 3.00 (6H, s), 3.19 (3H, s), 6.80 (2H, d, J = 9.1), 6.94 (1H, s), 7.03 (1H, d, J = 8.5), 7.15 (1H, s), 7.24-7.27 (2H, m), 7.47 (1H, d, J = 8.5)
Ib-81	164-165 °C, ^{1}H-NMR ($CDCl_3$) δ 2.69 (3H, s), 3.12 (3H, s), 3.16 (6H, s), 3.59 (3H, s), 3.77 (3H, s), 5.18 (2H, s), 6.59 (1H, d, J = 8.5), 6.84 (1H, s), 7.14 (1H, d, J = 8.5), 7.32-7.48 (7H, m), 7.84 (1H, dd, J = 8.5, 2.4), 8.40 (1H, d, J = 2.4)
Ib-82	72-74 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.82 (3H, s), 3.16 (6H, s), 3.52 (3H, s), 3.74 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, t, J = 6.8), 5.68 (1H, s), 5.85 (1H, s), 6.45 (1H, s), 6.61 (1H, d, J = 9.1), 6.94 (2H, d, J = 1.8), 7.05 (1H, d, J = 1.2), 7.81 (1H, dd, J = 8.5, 2.4) 8.46 (1H, d, J = 2.4),
Ib-83	132-133 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.81 (3H, s), 2.71 (3H, s), 3.15 (6H, s), 3.25 (3H, s), 3.61 (3H, s), 3.77 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, t, J = 6.8), 6.59 (1H, d, J = 8.5), 6.83 (1H, s), 7.07 (1H, d, J = 8.5), 7.34 (1H, dd, J = 8.5, 1.8), 7.38 (1H, d, J = 1.8), 7.83 (1H, dd, J = 6.1, 1.2), 8.39 (1H, d, J = 1.2)
Ib-90	91-91.5 °C, ^{1}H-NMR ($CDCl_3$) δ 1.79 (3H, s), 1.82 (3H, s), 2.27 (3H, s), 2.31 (3H, s), 3.00 (6H, s), 4.87 (2H, d, J = 7.1), 5.57 (1H, br t, J = 7.1), 6.79-6.83 (3H, m), 7.10 (1H, s), 7.16 (1H, s), 7.27 (2H, d, J = 8.8), 7.59 (1H, dd, J = 2.4, 8.3), 8.17 (1H, dd, J = 0.7, 2.4)
Ib-99	239-241 °C, ^{1}H-NMR ($CDCl_3$) δ 2.28 (3H, s), 2.34 (3H, s), 3.02 (6H, s), 3.30 (3H, s), 6.81 (2H, d, J = 8.8), 7.26 (2H, d, J = 8.8), 7.95 (1H, dd, J = 2.2, 8.0), 8.15 (1H, dd, J = 0.7, 8.0), 8.75 (1H, dd, J = 0.7, 2.2)
Ib-101	159-160 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 3.50 (3H, s), 3.76 (3H, s), 4.62 (2H, d, J = 6.8), 5.53 (1H, t, J = 6.8), 5.73 (1H, s), 5.84 (1H, s), 6.48 (1H, s), 6.91-6.99 (2H, m), 7.04 (1H, d, J = 1.8), 7.59 (2H, d, J = 5.5), 8.70 (2H, d, J = 5.5),
Ib-105	113-114 °C, 2.28 (3H, s), 2.29 (3H, s), 3.91 (3H, s), 5.21 (2H, s), 6.83 (1H, dd, J = 2.0, 8.3), 6.90 (1H, d, J = 2.0), 6.95 (1H, d, J = 8.3), 7.12 (1H, s), 7.17 (1H, s), 7.30 (2H, d, J = 6.1), 7.31-7.50 (5H, m), 8.65 (2H, d, J = 6.1)
Ib-124	157-158 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 3.66 (3H, s), 3.80 (3H, s), 4.05 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, t, J = 6.8), 5.72 (1H, s), 5.78 (1H, s), 6.89-6.98 (2H, m), 7.03 (1H, d, J = 1.8) 7.09 (1H, s), 7.45 (1H, d, J = 1.2) 8.89 (1H, d, J = 1.2)

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Ib-127	99-100 °C, ^{1}H-NMR ($CDCl_3$) δ 2.32 (3H, s), 2.40 (3H, s), 3.03 (6H, s), 4.04 (3H, s), 6.79 (2H, d, J = 8.7), 6.87 (1H, s), 7.16 (1H, s), 7.25 (2H, d, J = 7.3), 7.34 (1H, s), 8.86 (1H, d, J = 1.2)
Ib-145	184-185 °C, ^{1}H-NMR ($CDCl_3$) δ 2.60 (3H, s), 3.14 (3H, s), 3.71 (3H, s), 3.84 (3H, s), 5.19 (2H, s), 7.16 (1H, d, J = 7.9), 7.33 (7H, m), 7.58 (1H, d, J = 8.6), 7.59 (1H, s), 8.24 (1H, d, J = 9.2)
Ib-146	154-155 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 3.62 (3H, s), 3.80 (3H, s), 4.62 (2H, d, J = 6.8), 5.53 (1H, t, J = 6.8), 5.69 (1H, s), 5.76 (1H, s), 6.89-7.03 (3H, m), 7.12 (1H, s), 7.57 (1H, d, J = 8.5) 8.14 (1H, d, J = 9.2)
Ib-147	195-196 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.64 (3H, s), 3.26 (3H, s), 3.71 (3H, s), 3.84 (3H, s), 4.64 (2H, d, J = 6.8), 5.49 (1H, t, J = 6.8), 7.10 (1H, d, J = 8.6), 7.34 (1H, dd, J = 8.5, 1.8), 7.39 (1H, d, J = 1.8) 7.59 (1H, s), 7.58 (1H, d, J = 9.2), 8.23 (1H, d, J = 9.2)
Ib-150	197-198 °C, ^{1}H-NMR ($CDCl_3$) δ 2.34 (3H, s), 2.39 (3H, s), 3.01 (6H, s), 6.81 (2H, d, J = 9.1), 7.21 (1H, s), 7.26 (2H, d, J = 8.5), 7.34 (1H, s), 7.58 (2H, d, J = 4.2)
Ib-154	185-186 °C, ^{1}H-NMR ($CDCl_3$) δ 2.61 (3H, s), 3.14 (3H, s), 3.25 (6H, s), 3.67 (3H, s), 3.81 (3H, s), 5.19 (2H, s), 6.85 (1H, d, J = 9.7), 7.14 (1H, d, J = 8.8), 7.33-7.48 (7H, m), 7.65 (1H, s), 8.02 (1H, d, J = 9.7)
Ib-162	188-189 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 3.60 (3H, s), 3.79 (3H, s), 4.21 (3H, s), 4.62 (2H, d, J = 6.8), 5.52 (1H, t, J = 6.8), 5.69 (1H, s), 5.72 (1H, s), 6.91-7.07 (4H, m), 7.13 (1H, s), 8.06 (1H, d, J = 9.8)
Ib-165	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 2.33 (3H, s), 2.39 (3H, s), 3.01 (6H, s), 4.19 (3H, s), 6.80 (2H, d, J = 9.1), 7.03 (1H, d, J = 9.1), 7.19 (1H, s), 7.26 (2H, d, J = 7.8), 7.33 (1H, s), 7.53 (1H, d, J = 9.1)
Ib-168	oil, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 3.65 (3H, s), 3.81 (3H, s), 4.63 (2H, d, J = 6.7), 5.53 (1H, br t, J = 6.7), 5.74 (1H, s), 5.77 (1H, s), 6.92-6.99 (3H, m), 7.04 (1H, d, J = 1.8), 8.53 (1H, d, J = 1.8), 8.69 (1H, s), 9.25 (1H, s)
Ib-169	165-166 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.72 (3H, s), 3.24 (3H, s), 3.77 (3H, s), 3.84 (3H, s), 4.64 (2H, d, J = 6.8), 5.49 (1H, t, J = 6.8), 7.10 (1H, d, J = 8.5), 7.35 (1H, dd, J = 8.5, 2.4), 7.41 (1H, d, J = 2.4), 7.45 (1H, s), 8.57 (1H, s), 8.69 (1H, s), 9.32 (1H, s)
Ib-188	165-168 °C, ^{1}H-NMR ($CDCl_3$) δ 2.29 (3H, s), 2.42 (3H, s), 3.00 (6H, s), 4.46 (2H, br s), 5.31 (1H, s), 6.78 (2H, d, J = 8.5), 7.11 (1H, s), 7.23 (2H, d, J = 8.5), 7.38 (1H, s),
Ib-198	103-104 °C, ^{1}H-NMR ($CDCl_3$) δ 2.28 (3H, s), 2.43 (3H, s), 2.99 (6H, s), 3.50 (2H, br s), 3.74 (3H, s), 5.76 (1H, s), 6.79 (2H, d, J = 8.5), 7.09 (1H, s), 7.24 (2H, d, J = 8.5), 7.43 (1H, s)
Ib-200	oil, ^{1}H-NMR ($CDCl_3$) δ 1.73 (3H, s), 1.76 (3H, s), 2.29 (3H, s), 2.46 (3H, s), 2.99 (6H, s), 3.16 (1H, brs), 3.68 (3H, s), 3.70 (2H, d, J = 5.5), 5.37 (1H, br t, J = 5.5), 5.67 (1H, s), 6.79 (2H, d, J = 9.2), 7.10 (1H, s), 7.24 (2H, d, J = 9.2), 7.44 (1H, s)
Ib-202	174-177 °C ^{1}H-NMR ($CDCl_3$) δ 2.31 (3H, s), 2.43 (3H, s), 3.01 (6H, s), 3.12 (3H, s),3.93 (3H, s), 6.25 (1H, br s), 6.37 (1H, s), 6.79 (2H, d, J = 8.5), 7.10 (1H, s), 7.25 (2H, d, J = 8.5), 7.42 (1H, s),
Ib-203	234-235 °C, ^{1}H-NMR ($CDCl_3$) δ 3.89 (3H, s), 3.95 (3H, s), 5.17 (2H, s), 5.56 (1H, brs), 5.74 (1H, brs), 6.92 (1H, dd, J = 8.2, 2.0), 7.05-7.07 (2H, m), 7.39-7.53 (7H, m), 7.58 (1H, s), 7.95 (1H, d, J = 8.0), 8.11 (1H, d, J = 8.3),

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Ib-204	197-198 °C, ^{1}H-NMR ($CDCl_3$) δ 2.68 (3H, s), 3.14 (3H, s), 3.93 (3H, s), 4.05 (3H, s), 5.20 (2H, s), 7.16 (1H, d, J = 7.3), 7.37-7.53 (9H, m), 7.96 (1H, d, J = 7.3), 8.06 (1H, s), 8.11 (1H, d, J = 8.0)
Ib-205	189-190 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.83 (3H, s), 3.89 (3H, s), 3.95 (3H, s), 4.63 (2H, d, J = 6.8), 5.53 (1H, t, J = 6.8), 5.55 (1H, s), 5.76 (1H, s), 6.89-7.03 (3H, m), 7.41 (1H, td, J = 7.3, 1.2), 7.52 (1H, td, J = 7.3, 1.2), 7.58 (1H, s), 7.95 (1H, d, J = 7.3), 8.11 (1H, d, J = 7.3)
Ib-206	166-167 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.81 (3H, s), 2.72 (3H, s), 3.25 (3H, s), 3.93 (3H, s), 4.05 (3H, s), 4.65 (2H, d, J = 6.8), 5.49 (1H, t, J = 6.8), 7.10 (1H, d, J = 8.5), 7.36-7.53 (4H, m), 7.96 (1H, d, J = 7.3), 8.05 (1H, s), 8.11 (1H, d, J = 8.5)
Ib-207	mp 75-78 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.76 (s, 3H), 1.77 (s, 3H), 1.81 (s, 3H), 2.27 (s, 3H), 2.36 (s, 3H), 3.75 (d, J = 6.6Hz, 2H), 4.63 (d, J = 6.6Hz, 2H), 5.33-5.36 (m, 1H), 5.52-5.57 (m, 1H), 6.93-7.11 (m, 5H), 7.24-7.30 (m, 2H), 8.12 (d, J = 2.4Hz, 1H) IR (KBr): 3405, 2970, 2924, 1596, 1570, 1521, 1493, 1466, 1386, 1363, 1299, 1282, 1235, 1196, 1126, 1079, 964 cm^{-1}
Ib-208	mp 100-102 °C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 3H), 1.81 (s, 3H), 2.27 (s, 3H), 2.34 (s, 3H), 3.73 (br s, 3H), 4.63 (d, J = 6.6Hz, 2H), 5.53-5.58 (m, 1H), 7.00-7.11 (m, 5H), 7.23-7.29 (m, 2H), 8.20 (d, J = 2.4Hz, 1H) IR (KBr): 3422, 3326, 3202, 2973, 2923, 1618, 1563, 1517, 1484, 1383, 1309, 1298, 1267, 1256, 1230, 1125, 1000 cm^{-1}
Ib-209	mp 107-108 °C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.31 (s, 3H), 2.40 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.52-5.58 (m, 1H), 7.02-7.11 (m, 3H), 7.18 (s, 1H), 7.37 (s, 1H), 7.66 (d, J = 8.7Hz, 1H), 8.54 (dd, J = 2.4, 8.4Hz, 1H), 9.53 (d, J = 2.1Hz, 1H) IR (KBr): 3440, 2969, 1592, 1572, 1517, 1497, 1460, 1346, 1314, 1294, 1264, 1233, 1195, 1128, 990 cm^{-1}
Ib-210	Oil ; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.36 (s, 3H), 4.56 (d, J = 6.6Hz, 2H), 5.54 (t, J = 6.6Hz, 1H), 6.97 (d, J = 8.1Hz, 2H), 7.15 (s, 1H), 7.25 (m, 1H), 7.28 (d, J = 8.1Hz, 2H), 7.32 (s, 1H), 7.45 (d, J = 7.5Hz, 1H), 7.75 (td, J = 7.5, 1.8Hz, 1H), 8.71 (d, J = 5.1Hz, 1H) .
Ib-211	mp 91-92°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.29 (s, 3H), 2.36 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.15 (m, 4H), 7.25 (m, 1H), 7.32 (s, 1H), 7.45 (m 1H) 7.,75 (m, 1H), 8.71 (m, 1H) ; IR (KBr) 1584, 1566, 1520, 1498, 1469, 1460, 1433, 1422, 1385, 1302, 1278, 1267, 1234, 1129, 998 cm^{-1}.
Ib-212	mp 120-122°C; ^{1}H NMR ($CDCl_3$) δ 1.13-1.25 (m, 4H), 1.62-1.90 (m, 4H), 1.77 (s, 3H), 1.81 (s, 3H), 2.03-2.16 (m, 2H), 2.27 (s, 3H), 2.36 (s, 3H), 3.31 (m, 1H), 4.63 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.90-7.13 (m, 5H), 7.21-7.32 (m, 2H), 8.10 (m, 1H) ; IR (KBr) 3392, 1591, 1516, 1482, 1298, 1274, 1262, 1231, 1136, 1124, 994, 835 cm^{-1}.
Ib-213	^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.16 (s, 6H), 2.27 (s, 3H), 3.85 (s, 3H), 4.63 (d, J=6.6 Hz, 2H), 5.53-5.58 (m, 1H), 6.98-7.13 (m, 4H), 7.22-7.30 (m, 3H), 8.31 (t, J=3.0 Hz, 1H), ; IR (neat): 2960, 2918, 1579, 1496, 1294, 1117, 991, 753 cm^{-1}
Ib-214	^{1}H NMR ($CDCl_3$) δ 1.69 (s, 3H), 1.74 (s, 3H), 1.77 (s, 3H), 1.81 (s, 3H), 2.17 (s, 3H), 2.26 (s, 3H), 4.56 (d, J=6.6Hz, 2H), 4.63 (d, J=6.9Hz, 2H), 5.34-5.39 (m, 1H), 5.53-5.58 (m, 1H), 7.97-7.13 (m, 4H), 7.21-7.29(m,3H), 8.30 (dd, J=1.5, 4.5Hz, 1H), ; IR (neat): 2968, 2914, 1577, 1516, 1495, 1267, 1229, 1117, 995, 841, 782 cm^{-1}

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Ib-215	mp 134-136°C;^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.93 (s, 6H); 1.94 (s, 6H); 3.78 (br s, 2H); 4.64 (d, J = 6.6Hz, 2H); 5.57 (m, 1H); 6.73-7.13 (m, 5H); 8.24 (m, 1H); IR (KBr): 3465, 3333, 3216, 2920, 1633, 1512, 1493, 1461, 1296, 1262, 1242, 1209, 1115 cm^{-1}.
Ib-216	mp 124-126°C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 3H); 1.77 (s, 3H); 1.79 (s, 3H); 1.82 (s, 3H); 1.93 (s, 6H); 1.95 (s, 6H); 3.74 (br, 1H); 3.77 (d, J = 6.3Hz, 2H); 4.64 (d, J = 6.9Hz, 2H); 5.38 (m, 1H); 5.57 (m, 1H); 6.73-7.10 (m, 5H); 8.14 (d, J = 2.7Hz, 1H); IR (KBr): 3272, 2913, 1596, 1509, 1466, 1302, 1261, 1240, 1209, 1115 cm^{-1}.
Ib-217	mp 103-110°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.91 (s, 6H); 1.93 (s, 6H); 4.64 (d, J = 6.6Hz, 2H); 5.57 (m, 1H); 6.74-7.23 (m, 5H); 8.28 (d, J = 2.7Hz, 1H); IR (KBr): 3441, 2921, 1570, 1514, 1462, 1298, 1264, 1241, 1210, 1113, 1004 cm^{-1}.
Ib-218	mp 109-110 °C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 3.77 (s, 3H), 3.78 (s, 3H), 4.87 (d, J = 7.2Hz, 2H), 5.57 (m, 1H), 6.45-6.55 (m, 2H), 6.81 (d, J = 8.7, Hz, 1H), 6.83 (s, 1H), 6.91 (s, 1H), 7.19 (t, J = 8.1Hz, 1H), 7.83 (dd, J = 8.7, 2.4 Hz, 1H), 8.37 (d, J = 2.4Hz, 1H) IR (KBr): 3425, 3348, 3223, 1634, 1604, 1524, 1484, 1463, 1443, 1396, 1359, 1279, 1209, 1053, 1032, 1003, 867, 832, 782, 661 cm^{-1}
Ib-219	mp 99-100 °C;^{1}H NMR ($CDCl_3$) δ 1.25 (d, J = 6.3Hz, 6H), 1.78 (s, 3H), 1.81 (s, 3H), 3.63 (m, 1H), 3.77 (s, 3H), 3.79 (s, 3H), 4.87 (d, J = 6.9Hz, 2H), 5.57 (m, 1H), 6.33-6.47 (m, 2H), 6.81 (d, J = 8.7Hz, 1H), 6.92 (s, 2H), 7.20 (t, J = 8.4Hz, 1H), 7.83 (dd, J = 8.7, 2.4Hz, 1H), 8.36 (d, J = 2.4Hz, 1H) . IR (KBr): 3408, 1627, 1599, 1526, 1502, 1477, 1280, 1246, 1210, 1182, 1133, 1121, 1054, 1030, 968, 869, 837, 783, 668 cm^{-1}
Ib-220	mp 139-145 °C; ^{1}H NMR ($CDCl_3$) δ 1.25 (d, J = 6.6Hz, 6H), 1.79 (s, 3H), 1.82 (s, 3H), 3.79 (s, 3H), 3.80 (s, 3H), 4.53 (m, 1H), 4.61(s, 2H), 4.88 (d, J = 6.9Hz, 2H), 5.57 (m, 1H), 6.82 (d, J = 9.0, Hz, 1H), 6.93 (s, 1H), 6.96 (s, 1H), 7.14-7.24 (m, 2H), 7.45 (m, 1H), 7.84 (dd, J = 9.0, 2.1Hz, 1H), 8.37 (d, J = 2.1Hz, 1H) . IR (KBr): 3377, 3273, 1656, 1605, 1564, 1520, 1484, 1465, 1394, 1339, 1282, 1207, 1055, 1033, 1008, 984, 871, 829, 779, 688, 653, 602, 541 cm^{-1}
Ib-221	mp 137-138 °C;^{1}H NMR ($CDCl_3$) δ 1.24 (d, J = 6.9Hz, 6H), 1.79 (s, 3H), 1.82 (s, 3H), 2.78 (d, J = 5.4Hz, 3H), 3.79 (s, 3H), 3.81 (s, 3H), 4.17 (q, J = 5.4Hz, 2H), 4.44 (m, 1H), 4.88 (d, J = 7.2Hz, 2H), 5.57 (m, 1H), 6.82 (d, J = 8.7Hz, 1H), 6.93 (s, 1H), 6.96 (s, 1H), 7.12-7.22 (m, 2H), 7.44 (t, J = 8.1Hz, 1H), 7.84 (dd, J = 8.7, 2.7Hz, 1H), 8.38 (d, J = 2.7Hz, 1H) IR (KBr): 3294, 1604, 1566, 1519, 1484, 1464, 1395, 1334, 1281, 1208, 1187, 1153, 1103, 1055, 1035, 1007, 981, 870, 829, 779, 688 cm^{-1}
Ib-222	mp 79-80 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 1.78 (s, 3H), 1.81 (s, 3H), 3.71 (d, J = 6.6Hz, 2H), 3.77 (s, 3H), 3.79 (s, 3H), 4.87 (d, J = 8.4Hz, 2H), 5.35 (m, 1H), 5.57 (m, 1H), 6.36-6.48 (m, 2H), 6.81 (d, J = 8.4, Hz, 1H), 6.92 (s, 2H), 7.21 (t, J = 8.4Hz, 1H), 7.83 (dd, J = 8.4, 2.4 Hz, 1H), 8.37 (d, J = 2.4Hz, 1H) IR (KBr): 3416, 1629, 1603, 1570, 1526, 1464, 1395, 1278, 1209, 1051, 1034, 1006, 869, 830, 777, 666 cm^{-1}

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Ib-223	mp 103-104 °C; ^{1}H NMR ($CDCl_3$) δ 1.56 (s, 3H), 1.72 (s. 3H), 1.78 (s, 3H), 1.82 (s, 3H), 2.79 (d, J = 5.1Hz, 3H), 3.78 (s, 3H), 3.79 (s, 3H), 4.22 (q, J = 5.1Hz, 1H), 4.28 (d, J = 6.9Hz, 2H), 4.88 (d, J = 6.6Hz, 2H), 5.30 (m, 1H), 5.57 (m, 1H), 6.82 (d, J = 8.1Hz, 1H), 6.91 (s, 2H), 6.95 (s, 1H), 7.17-7.26 (m, 2H), 7.37-7.44 (m, 1H), 7.83 (dd, J = 8.1, 2.4Hz, 1H), 8.37 (d, J = 2.4Hz, 1H) IR (KBr): 3404, 3313, 1604, 1566, 1520, 1484, 1465, 1395, 1335, 1282, 1209, 1153, 1127, 1055, 1034, 867, 828, 669 cm^{-1}
Ib-224	mp 95-96 °C; ^{1}H NMR ($CDCl_3$) δ 1.70 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 3.82 (br, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.57 (m, 1H), 6.64-6.55 (m, 2H), 6.81 (d, J = 8.4, Hz, 1H), 7.50 (t, J = 8.1Hz, 1H), 7.11 (s, 1H), 7.12 (s, 1H), 7.59 (dd, J = 8.4, 2.4 Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) IR (KBr): 3436, 3328, 3218, 1634, 1622, 1606,1566, 1522, 1480, 1460, 1444, 1396, 1362, 1304, 1285, 1245, 1168, 1129, 1008, 834 cm^{-1}
Ib-225	mp 90-91 °C;^{1}H NMR ($CDCl_3$) δ 1.26 (d, J = 6.3Hz, 2H), 1.79 (s, 3H), 1.82 (s, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 3.64 (m, 1H), 4.87 (d, J = 7.5Hz, 2H), 5.57 (m, 1H), 6.33-6.47 (m, 2H), 6.81 (d, J = 8.4, Hz, 1H), 7.05 (t, J = 8.1Hz, 1H), 7.10 (s, 1H), 7.13 (s, 1H), 7.59 (dd, J = 8.4, 2.4 Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) IR (KBr): 3335, 1628, 1606, 1527, 1481, 1283, 1240, 1183, 1116, 989, 835, 812, 635cm^{-1}
Ib-226	mp 87-88 °C; ^{1}H NMR ($CDCl_3$) δ 0.91-1.09 (m, 2H), 1.13-1.36 (m, 4H), 1.40-1.92 (m, 5H), 1.79 (s, 3H), 1.82 (s, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 2.98 (d, J = 6.6Hz, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.57 (m, 1H), 6.32-6.46 (m, 2H), 6.80 (d, J = 8.4Hz, 1H), 7.04 (t, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.12 (s, 1H), 7.59 (dd, J = 8.4, 2.4 Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) IR (KBr): 3444,1628, 1603, 1573, 1524, 1481, 1459, 1358, 1278, 1242, 1168, 1117, 1006, 974,825 cm^{-1}.
Ib-227	mp 76-77 °C;^{1}H NMR ($CDCl_3$) δ 1.55 (s, 3H), 1.71 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.19 (s, 3H), 2.28 (s, 3H), 2.80 (d, J = 5.4Hz, 3H), 4.20 (q, J = 5.4Hz, 1H), 4.27 (d, J = 7.2Hz, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.29 (m, 1H), 5.57 (m, 1H), 6.82 (d, J = 8.1Hz, 1H), 7.13 (s, 2H), 7.16-7.31 (m, 3H), 7.59 (dd, J = 8.1, 2.4Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) IR (KBr): 3314, 1605, 1562, 1514, 1481, 1346, 1328, 1307, 1283, 1154, 1125, 1072, 1003, 854, 831, 703, 666, cm^{-1}
Ib-228	foam; ^{1}H NMR ($CDCl_3$) δ 1.00-1.74 (m, 11H), 1.79 (s, 3H), 1.82 (s, 3H), 2.13 (s, 3H), 2.27 (s, 3H), 2.98 (d, J = 6.6Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.54-5.60 (m, 1H), 6.53 (dd, J = 2.4, 8.1Hz, 1H), 6.68 (d, J = 2.7Hz, 1H), 6.80 (d, J = 7.8Hz, 1H), 7.01 (d, J = 8.4Hz, 1H), 7.06 (s, 1H), 7.10 (s, 1H), 7.60 (dd, J = 2.4, 8.4Hz, 1H), 8.18 (d, J = 2.1Hz, 1H) IR (KBr): 3413, 2926, 2853, 1607, 1517, 1479, 1449, 1376, 1281, 1240, 1033, 977 cm^{-1}.
Ib-229	mp 110-112 °C; ^{1}H NMR ($CDCl_3$) δ 1.17-1.79 (m, 8H), 1.79 (s, 3H), 1.82 (s, 3H), 2.07-2.14 (m, 2H), 2.14 (s, 3H), 2.26 (s, 3H), 3.23-3.30 (m, 1H), 3.73 (br s, 1H), 4.87 (d, J = 6.9Hz, 2H), 5.54-5.60 (m, 1H), 6.52 (dd, J = 2.1, 8.1Hz, 1H), 6.68 (d, J = 2.7Hz, 1H), 6.80 (d, J = 8.7Hz, 1H), 7.01 (d, J = 8.4Hz, 1H), 7.06 (s, 1H);7.09 (s, 1H), 7.60 (dd, J = 2.7, 8.7Hz, 1H), 8.18 (d, J = 1.8Hz, 1H) IR (KBr): 3411, 3310, 2926, 2852, 1607, 1517, 1479, 1376, 1357, 1302, 1284, 1241, 1013, 980 cm^{-1}

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Ib-230	mp oil;^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.14 (s, 3H), 2.27 (s, 3H), 3.71 (d, J = 6.6Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.33-5.37 (m, 1H), 5.55-5.60 (m, 1H), 6.55 (dd, J = 2.4, 8.4Hz, 1H), 6.71 (d, J = 2.4Hz, 1H), 6.81 (d, J = 8.7Hz, 1H), 7.03 (d, J = 8.1Hz, 1H), 7.06 (s, 1H), 7.09 (s, 1H), 7.61 (dd, J = 2.7, 8.7Hz, 1H), 8.18 (d, J = 2.4Hz, 1H) IR ($CDCl_3$): 3017, 2975, 1607, 1517, 1479, 1378, 1358, 1282, 1240, 1227, 1220, 977 cm^{-1}
Ib-231	mp 137-139 °C; ^{1}H NMR ($CDCl_3$) δ 1.05-1.80 (m, 8H), 1.79 (s, 3H), 1.82 (s, 3H), 2.05-2.12 (m, 2H), 2.22 (s, 3H), 2.26 (s, 3H), 3.22-3.30 (m, 1H), 3.75 (br s, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.34-6.44 (m, 2H), 6.81 (d, J = 9.0Hz, 1H), 7.03 (d, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.12 (s, 1H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (d, J = 2.7Hz, 1H) IR (KBr): 3331, 2924, 2852, 1628, 1605, 1526, 1481, 1452, 1425, 1375, 1334, 1302, 1283, 1241, 1176, 1114, 1016, 986 cm^{-1}
Ib-232	mp 108-109 °C; ^{1}H NMR ($CDCl_3$) δ 1.48-1.78 (m, 6H), 1.79 (s, 3H), 1.82 (s, 3H), 2.00-2.09 (m, 2H), 2.22 (s, 3H), 2.26 (s, 3H), 3.75-3.83 (m, 1H), 3.84-3.90 (m, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.35-6.45 (m, 2H), 6.80 (d, J = 8.4Hz, 1H), 7.04 (t, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.12 (s, 1H), 7.59 (dd, J = 2.7, 8.4Hz, 1H), 8.17 (dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3328, 2955, 2866, 1627, 1605, 1526, 1481, 1423, 1394, 1356, 1337, 1283, 1240, 1176, 1116, 1016, 974 cm^{-1}
Ib-233	mp 77-79 °C; ^{1}H NMR ($CDCl_3$) δ 1.00 (d, J = 0.6Hz, 3H), 1.02 (d, J = 0.6Hz, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 1.86-1.99 (m, 1H), 2.22 (s, 3H), 2.26 (s, 3H), 2.24 (d, J = 13.2Hz, 2H), 3.90 (br s, 1H), 4.87 (d, J = 6.6Hz, 2H), 5.54-5.60 (m, 1H), 6.34-6.50 (m, 2H), 6.81 (d, J = 8.7Hz, 1H), 7.05 (t, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.12 (s, 1H), 7.59-7.61 (m, 1H), 8.16-8.17 (m, 1H) IR (KBr): 3340, 2958, 2928, 2866, 1627, 1606, 1530, 1481, 1395, 1358, 1337, 1284, 1241, 1178, 1115, 1046, 991 cm^{-1}
Ib-234	mp 109-111 °C; ^{1}H NMR ($CDCl_3$) δ 1.25 (t, J = 7.2Hz, 3H), 1.78 (s, 3H), 1.82 (s, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 2.62-2.70 (m, 2H), 4.19 (br s, 1H), 4.31 (s, 1H), 4.84 (d, J = 6.6Hz, 2H), 5.54-5.60 (m, 1H), 6.39-6.50 (m, 2H), 6.81 (d, J = 9.0Hz, 1H), 7.06 (t, J = 8.4Hz, 1H), 7.10 (s, 1H); 7.12 (s, 1H), 7.21 (d, J = 8.1Hz, 2H), 7.32 (d, J = 8.1Hz, 2H), 7.59 (dd, J = 2.7, 8.4Hz, 1H), 8.17 (d, J = 1.8Hz, 1H) IR (KBr): 3286, 2967, 2927, 2871, 1628, 1598, 1529, 1481, 1469, 1376, 1356, 1336, 1274, 1237, 1173, 1149, 1121, 1003, 975 cm^{-1}
Ib-235	mp oil; ^{1}H NMR ($CDCl_3$) δ 1.26 (s, 3H), 1.27 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H),; 2.22 (s, 3H), 2.26 (s, 3H), 2.87-2.99 (m, 1H), 4.31 (s, 2H), 4.87 (d, J = 7.5Hz, 2H), 5.55-5.60 (m, 1H), 6.40-6.51 (m, 2H), 6.81 (d, J = 8.7Hz, 1H), 7.07 (t, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.12 (s, 1H), 7.17 (d, J = 8.1Hz, 2H), 7.33 (d, J = 8.1Hz, 2H), 7.57-7.61 (m, 1H), 8.16-8.18 (m, 1H) IR ($CDCl_3$): 3010, 2964, 1628, 1603, 1523, 1480, 1357, 1282, 1241, 977 cm^{-1}
Ib-236	mp 203-204 °C: ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.75 (s, 3H), 2.19 (s, 3H), 2.21 (s, 3H), 4.39 (d, J = 4.5Hz, 2H), 4.81 (d, J = 6.9Hz, 2H), 5.47-5.52 (m, 1H), 6.48-6.49 (m, 1H), 6.62 (d, J = 8.4Hz, 2H), 6.85 (d, J = 8.4Hz, 1H), 7.05-7.09 (m, 4H), 7.50 (d, J = 8.1Hz, 2H), 7.71 (dd, J = 2.4, 8.7Hz, 1H), 7.92 (d, J = 8.1Hz, 2H), 8.13 (d, J = 2.1Hz, 1H) IR (KBr): 3422, 3004, 1686, 1609, 1523, 1482, 1423, 1392, 1377, 1356, 1283, 1240, 1182, 1124, 977 cm^{-1}

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Ib-237	mp 144-147 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.29 (s, 3H), 3.92 (s, 3H), 4.46 (s, 3H), 4.46 (s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.65-6.70 (m, 2H), 6.76 (d, J = 8.4Hz, 2H), 7.17-7.21 (m, 2H), 7.47-7.50 (m, 2H), 7.59 (dd, J = 2.7, 8.4Hz, 2H), 8.01-8.05 (m, 2H), 8.16 (d, J = 2.7Hz, 1H) IR (KBr): 3366, 2951, 1709, 1609, 1523, 1478, 1469, 1437, 1313,1282, 1235, 1180, 1115, 1105, 1019, 987 cm^{-1}
Ib-238	mp 75-76 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.06 (s, 3H), 2.08 (s, 3H), 2.25 (s, 3H), 3.72 (d, J = 6.9Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.35-5.60 (m, 2H), 6.49-6.55 (m, 2H), 6.79-7.08 (m, 4H), 7.60 (dd, J = 2.7, 8.4Hz, 1H), 8.18 (dd, J = 0.9, 2.7Hz, 1H) IR (KBr): 3331, 2965, 2916, 1610, 1522, 1480, 1449, 1393, 1302, 1283, 1251, 1240, 977 cm^{-1}
Ib-239	mp 87-89 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (m, 3H), 2.30 (s, 3H), 3.82 (d, J = 5.4Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.18-5.36 (m, 2H), 5.54-5.60 (m, 1H), 5.93-6.06 (m, 1H), 6.66-6.71 (m, 2H), 6.80 (d, J = 8.7Hz, 1H), 7.10 (s, 1H), 7.15 (s, 1H), 7.17-7.22 (m, 2H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.16(dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3330, 3007, 2973, 2855, 1610, 1526, 1481, 1470, 1392, 1376, 1354, 1299, 1283, 1266, 1240, 1129, 1019, 988 cm^{-1}
Ib-240	mp 113-114 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.25-2.27 (m, 4H), 2.29 (s, 3H), 3.99 (d, J = 2.4Hz, 2H), 4.87 (d, J = 5.1Hz, 2H), 5.50-5.60 (m, 1H), 6.73-6.78 (m, 2H), 6.81 (dd, J = 0.6, 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.21-7.25 (m, 2H), 7.59 (dd, J = 2.7, 8.4Hz, 1H), 8.17 (dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3311, 3271, 2974, 2924, 1609, 1525, 1481, 1392, 1377, 1352, 1320, 1300, 1283, 1265, 1239, 1182, 1121, 987 cm^{-1}
Ib-241	mp 125-126 °C; ^{1}H NMR ($CDCl_3$) δ 0.94-1.87 (m, 11H), 1.78 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.30 (s, 3H), 3.00 (d, J = 6.6Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.54-5.60 (m, 1H), 6.60-6.67 (m, 2H), 6.81 (d, J = 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.16-7.21 (m, 2H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (dd, J = 0.6, 2.1Hz, 1H) IR (KBr): 3356, 2919, 2851, 1613, 1528, 1482, 1470, 1447, 1395, 1355, 1325, 1299, 1284, 1262, 1241, 1182, 1020, 985 cm^{-1}
Ib-242	mp 173-175 °C; ^{1}H NMR ($CDCl_3$) δ 1.14-1.787 (m, 8H), 1.78 (s, 3H), 1.81 (s, 3H), 2.08-2.12 (m, 2H), 2.27 (s, 3H), 2.30 (s, 3H), 3.26-3.34 (m, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.62-6.67 (m, 2H), 6.81 (dd, J = 0.6, 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.15-7.19 (m, 2H), 7.58 (dd, J = 2.4, 8.7Hz, 1H), 8.16 (dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3326, 2922, 2852, 1611, 1523, 1482, 1452, 1393, 1354, 1319, 1300, 1282, 1239, 1182, 1125, 983 cm^{-1}
Ib-243	mp 141-142 °C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.28 (s, 3H), 4.27 (br s, 1H), 4.43 (br s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.63-6.66 (m, 2H), 6.81 (d, J = 8.4Hz, 1H), 7.09 (s, 1H), 7.13 (s, 1H), 7.17-7.20 (m, 2H), 7.33-7.35 (m, 2H), 7.57 (dd, J = 2.1, 8.4Hz, 1H), 8.16 (d, J = 2.4Hz, 1H), 8.57-8.59 (m, 2H) IR (KBr): 3279, 2972, 2925, 1603, 1522, 1479, 1459, 1418, 1375, 1351, 1318, 1282, 1272, 1240, 1179, 1120, 1001, cm^{-1}

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Ib-244	mp 123-125 °C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.29 (s, 3H), 4.38 (s, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.54-5.60 (m, 1H), 6.69-6.73 (m, 2H), 6.81 (dd, J = 0.6, 8.4Hz, 1H), 7.09 (s, 1H), 7.14 (s, 1H), 7.17-7.22 (m, 2H), 7.26-7.44 (m, 5H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.16 (d, J = 1.8Hz, 1H) IR (KBr): 3348, 2966, 2921, 1613, 1527, 1482, 1469, 1453, 1394, 1356, 1326, 1297, 1285, 1264, 1241, 1020, 987 cm^{-1}
Ib-245	mp 137-138 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.28 (s, 6H), 3.33 (s, 3H), 4.55 (br s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.81 (dd, J = 0.6, 8.7Hz, 1H), 7.12-7.14 (m, 2H), 7.35-7.39 (m, 2H), 7.44-7.49 (m, 2H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (dd, J = 0.6, 2.4Hz, 1H), IR (KBr): 3376, 3284, 2972, 2922, 1604, 1480, 1462, 1342, 1281, 1180, 1140, 999 cm^{-1}
Ib-246	mp 118-120 °C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.87 (s, 3H), 2.26 (s, 3H), 2.30 (s, 3H), 4.39 (s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.70-6.73 (m, 2H), 6.80 (d, J = 8.4Hz, 1H), 7.10-7.14 (m, 3H), 7.15-7.24 (m, 3H), 7.34 (dd, J = 3.0, 5.1Hz, 1H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (d, J = 1.8Hz, 1H) IR (KBr): 3397, 2973, 2920, 2851, 1610, 1522, 1480, 1470, 1376, 1350, 1298, 1280, 1260, 1235, 1182, 1122, 980 cm^{-1}
Ib-247	mp 112-115 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 4.22 (s, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.55-5.60 (m, 1H), 6.44-6.45 (m, 1H), 6.70-6.74 (m, 2H), 6.81 (dd, J = 0.9, 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.18-7.23 (m, 1H), 7.41-7.45 (m, 1H), 7.59 (dd, J = 2.4, 8.7Hz, 1H), 8.17 (dd, J = 0.6, 2.4Hz, 1H), IR (KBr): 3338, 2924, 1613, 1526, 1501, 1482, 1471, 1394, 1355, 1317, 1298, 1285, 1241, 1156, 1020, 977 cm^{-1}
Ib-248	mp 123-125 °C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.81 (s, 3H), 2.27 (s, 3H), 2.29 (s, 3H), 2.60 (br s, 3H), 4.87 (d, J = 7.2Hz, 2H), 5.54-5.60 (m, 1H), 6.73-6.77 (m, 2H), 6.81 (d, J = 8.4Hz, 1H), 7.09 (s, 1H), 7.14 (s, 1H), 7.14-7.18 (m, 2H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (d, J = 2.4Hz, 1H), IR (KBr): 3449, 3341, 2972, 2925, 1623, 1604, 1521, 1481, 1394, 1359, 1281, 1241, 1128, 984 cm^{-1}
Ib-249	mp 70-72 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 2.89 (s, 3H), 4.87 (d, J = 7.2Hz, 2H), 5.55-5.60 (m, 1H), 6.66-6.71 (m, 2H), 6.81 (dd, J = 0.9, 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.19-7.23 (m, 2H), 7.59 (dd, J = 2.7, 8.4Hz, 1H), 8.17 (dd, J = 0.6, 2.4Hz, 1H), IR (KBr): 3356, 2923, 2883, 1614, 1603, 1529, 1482, 1393, 1357, 1320, 1298, 1282, 1264, 1241, 1182, 981 cm^{-1}
Ib-250	mp 87-88 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.80 (s, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 3.71 (d, J = 6.9Hz, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.32-5.37 (m, 1H), 5.55-5.60 (m, 1H), 6.35-6.47 (m, 2H), 6.81 (dd, J = 0.6, 8.4Hz, 1H), 7.02-7.13 (m, 3H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.16 (dd, J = 0.9, 5.7Hz, 1H), IR (Nujol): 3330, 2923, 2853, 1627, 1606, 1564, 1527, 1481, 1471, 1395, 1376, 1357, 1337, 1284, 1240, 1178, 1116, 990 cm^{-1}

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Ib-251	mp 102-103 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 2.19 (s, 3H), 2.27 (s, 3H), 2.31 (s, 3H), 3.49 (br s, 1H), 3.78 (d, J = 6.9Hz, 2H), 4.87 (d, J = 6.9Hz, 2H), 5.42 (t, J = 6.9Hz, 1H), 5.57 (t, J = 7.2Hz, 1H), 6.68 (d, J = 8.1Hz, 1H), 6.80 (d, J = 8.4Hz, 1H), 7.09 (s, 2H), 7.13-7.17 (m, 2H), 7.59 (dd, J = 2.7, 8.4Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) ; IR (KBr):3363, 2969, 2918, 2884, 2854, 1609, 1601, 1517, 1482, 1468, 1442, 1378, 1283, 1250, 981, 891cm^{-1}.
Ib-252	mp 109-110 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.23 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 3.85 (br s, 1H), 4.42 (s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.57 (t, J = 6.6Hz, 1H), 6.69 (d, J = 8.1Hz, 1H), 7.09-7.15 (m, 4H), 7.31-7.44 (m, 5H), 7.59 (dd, J = 2.4, 8.7Hz, 1H), 8.17 (d, J = 1.5Hz, 1H) ; IR (KBr): 3431, 3351, 2970, 2919, 2854, 1602, 1517, 1483, 1466, 1451, 1377, 1285, 1250, 1132, 975, 836 cm^{-1}.
Ib-253	mp 72-73 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 3.77 (d, J = 6.9Hz, 2H), 3.92 (br s, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.38 (t, J = 6.9Hz, 1H), 5.57 (t, J = 6.9Hz, 1H), 6.74 (dd, J = 8.1, 8.7Hz, 1H), 6.81 (dd, J = 0.9, 6.3Hz, 1H), 6.99-7.00 (m, 1H), 7.00 (s, 1H), 7.03 (s, 1H), 7.14 (s, 1H), 7.58 (dd, J = 2.7, 8.7Hz, 1H), 8.16 (d, J = 2.7Hz, 1H) ; IR (KBr): 3431, 2971, 2915, 1624, 1599, 1528, 1479, 1465, 1335, 1241, 1122, 987, 833 cm^{-1}.
Ib-254	mp 106-107 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.29 (s, 3H), 4.42 (s, 2H), 3.85 (br s, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.57 (t, J = 7.2Hz, 1H), 6.73 (dd, J = 8.7, 8.7Hz, 1H), 6.81 (d, J = 8.4Hz, 1H), 6.96-6.99 (m, 1H), 7.03 (d, J = 12.9Hz, 1H), 7.10 (d, J = 9.9Hz, 2H), 7.26-7.43 (m, 5H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.16 (d, J = 1.8Hz, 1H) ;IR (KBr): 3428, 2922, 2857, 1623, 1601, 1566, 1500, 1427, 1391, 1376, 1308, 1298, 1149, 1134, 1074, 1038, 1018, 927, 895 cm^{-1}.
Ib-255	mp 83-84 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 3.79 (d, J = 6.3Hz, 2H), 4.29 (br s, 1H), 4.87 (d, J = 7.2Hz, 2H), 5.39 (t, J = 6.6Hz, 1H), 5.57 (t, J = 7.2Hz, 1H), 6.71 (d, J = 8.7Hz, 1H), 6.81 (d, J = 8.1Hz, 1H), 7.10 (s, 1H), 7.13 (s, 1H), 7.16 (dd, J = 2.1, 8.4Hz, 1H), 7.27 (dd, J = 2.1, 7.5Hz, 1H), 7.58 (dd, J = 2.7, 8.7Hz, 1H), 8.16 (d, J = 1.8Hz, 1H) ; IR (KBr): 3420, 3356, 2968, 2924, 1603, 1520, 1482, 1468, 1284, 1248, 1078, 981, 838 cm^{-1}.
Ib-256	mp 89-90 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.26 (s, 3H), 2.29 (s, 3H), 4.46 (s, 2H), 4.79 (br s, 1H), 4.87 (d, J = 6.9Hz, 2H), 5.57 (t, J = 7.2Hz, 1H), 6.69 (d, J = 8.1Hz, 1H), 6.81 (d, J = 8.7Hz, 1H), 7.09-7.13 (m, 3H), 7.31-7.43 (m, 6H), 7.58 (dd, J = 2.7, 8.7Hz, 1H), 8.16 (d, J = 2.4Hz, 1H) ;IR (KBr): 3422, 3340, 2975, 2923, 1604, 1520, 1482, 1455, 1286, 1248, 975, 887 cm^{-1}.
Ib-257	mp 62-63 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.28 (s, 3H), 2.32 (s, 3H), 3.76 (d, J = 6.6Hz, 2H), 3.86 (s, 3H), 4.27 (br s, 1H), 4.87 (d, J = 6.9Hz, 2H), 5.41 (t, J = 6.6Hz, 1H), 5.58 (t, J = 6.9Hz, 1H), 6.67 (d, J = 8.1Hz, 1H), 6.78-6.79 (m, 2H), 6.88 (dd, J = 1.8, 8.1Hz, 1H), 7.11 (s, 1H), 7.18 (s, 1H), 7.59 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (d, J = 1.8Hz, 1H) ; IR (KBr): 3437, 2880, 2856, 1560, 1416, 1378, 1306, 1176, 1075, 1017, 948, 898, 883 cm^{-1}.

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Ib-258	mp 86-87 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 3.31 (s, 3H), 3.87 (s, 3H), 4.40 (s, 2H), 4.67 (br s, 1H), 4.87 (d, J = 6.9Hz, 2H), 5.57 (t, J = 7.2Hz, 1H), 6.65 (d, J = 7.8Hz, 1H), 6.79-6.86 (m, 3H), 7.10 (s, 1H), 7.17 (s, 1H), 7.31-7.44 (m, 5H), 7.59 (dd, J = 2.4, 8.7Hz, 1H), 8.17 (d, J = 2.4Hz, 1H) ; IR (KBr): 3426, 2948, 2914, 2857, 1600, 1561, 1525, 1415, 1304, 1177, 1018, 948, 900, 883 cm^{-1}.
Ib-259	mp 108-109 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 2.31 (s, 3H), 3.66 (br s, 1H), 3.74 (d, J = 6.8 Hz, 2H), 4.87 (d, J = 7.1 Hz, 2H), 5.38 (br t, J = 6.8 Hz, 1H), 5.58 (br t, J = 7.1 Hz, 1H),6.67 (d, J = 8.5 Hz, 2H), 6.81 (dd, J = 0.7, 8.6 Hz, 1H), 7.10 (s, 1H), 7.15 (s, 1H), 7.20 (d, J = 8.5 Hz, 2H), 7.59 (dd, J = 2.4, 8.6 Hz, 1H)8.17(dd, J = 0.7, 2.4 Hz, 1H)
Ib-260	mp 74-75 °C; ^{1}H NMR ($CDCl_3$) δ 1.72 (s, 3H), 1.77 (s, 3H), 1.81(s, 6H), 2.29 (s, 3H), 2.31 (s, 3H), 3.76 (d, 2H, J=6.9Hz), 5.07 (d, J=7.2Hz ,2H), 5.39 (m,1H), 5.58 (m, 1H), 6.77 (d, J =7.8Hz, 2H), 7.11-7.23 (m, 5H),8.26 (d, J=2.1Hz, 1H), 8.40 (d, J=2.1Hz, 2H); IR ($CHCl_3$): 3426, 2975, 2918, 2862, 1612, 1556, 1528, 1498, 1471, 1379, 1354, 1299, 1241, 12256, 1185, 1091, 970, 947cm^{-1}
Ib-261	^{1}H NMR (DMSO) δ 1.73 (s, 3H), 1.76 (s, 3H), 2.22 (s, 3H), 2.23 (s, 3H), 4.82 (d, J=6.9Hz, 2H), 5.50 (t, J=6.9Hz 1H), 6.86 (d , J=8.4Hz, 1H), 6.96-7.05 (m, 2H), 7.11-7.17 (m, 3H), 7.72 (dd, J= 2.7, 8.7Hz, 1H), 8.15 (d, J=2.7Hz, 1H), 9.94 (brs, 1H) ; IR (neat): 3350, 2964, 1601, 1520, 1480, 1377, 1355, 1283, 1241, 1113, 979, 755 cm^{-1}
Ib-262	mp 96 °C ^{1}H NMR (DMSO) δ 1.74 (s, 6H), 1.76 (s, 3H), 1.77 (s, 3H), 2.22 (s, 3H), 2.34 (s, 3H), 4.65 (d, J=6.9Hz, 2H), 4.82 (d, J=6.6Hz, 2H), 5.44-5.54 (m, 2H), 7.10-7.18 (m, 3H), 7.21-7.27(m,2H), 7.73(dd, J=2.4, 8.4Hz, 1H), 8.15 (d, J=2.4Hz, 1H), ; IR (nujol): 1600, 1517, 1280, 1269, 1127, 995, 836 cm^{-1}
Ib-263	mp 78-79 °C ^{1}H NMR (CD_3OD) δ 1.79 (s, 3H), 1.80 (s, 3H), 2.42 (s, 6H), 3.92 (s, 3H), 4.83 (d, J=7.0Hz, 2H), 5.50-5.56 (m, 1H), 6.84 (dd , J=0.6, 8.7Hz, 1H), 7.05-7.18 (m, 5H), 7.67 (dd, J=2.7, 8.7Hz, 1H), 8.07 (dd, J=2.7, 0.6Hz, 1H), ; IR (nujol): 1600, 1577, 1280, 1270, 1127, 983, 838 cm^{-1}
Ib-264	mp 80-81 °C ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.72 (s, 6H), 4.88 (d, J=7.2Hz, 2H), 5.13 (s, 2H), 5.55-5.60(m, 1H), 6.40 (dd , J=1.5, 3.6Hz, 1H), 6.48 (d , J=3.6Hz, 1H), 6.82 (d, J=8.4Hz, 1H), 7.02-7.06 (m, 1H), 7.08-7.16 (m, 4H), 7.47-7.48 (m, 1H), 7.58 (dd, J=2.7, 8.4 Hz, 1H) 8.16 (d, J= 2.7 Hz, 1H) : IR (nujol): 1601, 1518, 1281, 1125, 984, 834 cm^{-1}
Ib-265	mp 105 °C ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 6H), 4.88 (d, J=7.2Hz, 2H), 5.20 (s, 2H), 5.50-5.60(m, 1H), 6.81 (d, J=8.4Hz, 1H), 7.00-7.15 (m, 5H), 7.32-7.50 (m, 5H), 7.58 (dd, J=2.4, 8.4 Hz, 1H) 8.16 (d, J= 2.4 Hz, 1H) : IR (nujol): 1602, 1299, 1276, 1128, 974, 749 cm^{-1}
Ib-266	mp 188-190 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 2.29 (s, 3H), 4.88 (d, J = 7.1 Hz, 2H), 4.89 (s, 2H), 5.58 (t, J = 7.1 Hz, 2H), 6.83 (dd, J = 8.4, 0.6 Hz, 1H), 7.13 (s, 1H), 7.15 (s, 1H), 7.50-7.55 (m, 2H), 7.59 (dd, J = 8.4, 2.4 Hz, 1H), 7.97-8.02 (m, 2H), 8.16 (dd, J = 2.4, 0.6 Hz, 1H): IR (KBr): 3367, 3321, 3271, 1602, 1479, 1333, 1281, 1163, 1153, 995, 980, 785, 607, 553 cm^{-1}

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Ib-267	mp 176-178 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.19 (s, 3H), 2.28 (s, 3H), 4.88 (d, J = 6.9 Hz, 2H), 4.96 (s, 2H), 5.57 (t, J = 7.1 Hz, 2H), 6.82 (dd, J = 8.4, 0.6 Hz, 1H), 7.11 (s, 1H), 7,15 (s, 1H), 7.47 (t, J = 8.1 Hz, 1H), 7.59 (dd, J = 8.4. 2.6 Hz, 1H), 7.74 (dd, J = 9.0, 1.8 Hz, 1H), 7.80 (dd, J = 8.1, 1.8 Hz, 1H), 8.16 (dd. J = 2.6, 0.6 Hz, 1H); IR (KBr): 3352, 3261, 1603. 1479, 1317. 1152. 993, 831, 777, 600 cm^{-1}
Ib-268	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.81 (s, 3H), 2.05 (s, 3H), 2.19 (s, 3H), 2.26 (s, 3H), 3.72 (d, J = 6.6Hz, 2H), 3.77 (br s, 1H), 4.85 (m, 2H), 5.35 (m, 1H), 5.56 (m, 1H), 6.34 (dd, J = 2.1, 9.3 Hz, 1H), 6.45 (dd, J = 2.1, 8.4 Hz, 1H), 6.61 (d, J = 8.4 Hz, 1H), 6.97 (s, 1H), 7.07 (t, J = 8.4 Hz, 1H), 7.34 (d. J = 8.4 Hz, 1H)
Ib-269	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 6H), 1.82 (s, 3H), 2.21 (s, 3H), 2.25 (s, 3H), 2.27 (s, 3H), 3.71(d, J = 6.6 Hz, 2H), 4.89 (d, J = 6.6 Hz, 2H), 5.35 (br t, J = 6.6 Hz, 1H), 5.57 (br t, J = 6.6 Hz, 1H), 6.39 (dd, J = 2.1, 12.6 Hz, 1H), 6.45 (dd, J = 2.1, 8.4 Hz, 1H), 7.06 (t, J = 8.4 Hz, 1H), 7.10 (s, 1H), 7.12 (s. 1H). 7.41 (d. J = 2.4 Hz. 1H), 8.01 (d, J = 2.4 Hz, 1H)
Ib-270	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 6H), 1.82 (s, 3H), 2.05 (s, 3H), 2.07 (s, 3H), 2.20 (s, 3H), 3.72 (d, J = 6.6Hz, 2H), 3.85 (br, 1H), 4.85 (d. J = 7.8Hz, 2H), 5.36 (m, 1H), 5.56 (m, 1H), 6.39 (dd. J = 2.4, 12.3 Hz, 1H), 6.45 (dd. J = 2.4, 8.1 Hz, 1H), 6.68(s, 1H). 6.97 (s, 1H), 7.07 (t, J = 8.4 Hz, 1H), 7.10 (s, 1H), 7.93 (s. 1H)
Ib-271	oil, ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.81 (s, 3H), 2.20 (s, 3H), 2.25 (s, 3H), 2.27 (s, 3H), 4.90 (d, J = 6.6 Hz, 2H), 5.58 (br t, J = 6.9 Hz, 1H), 6.47 (dd, J = 2.1, 11.4 Hz, 1H), 6.53 (dd, J = 2.1, 8.1 Hz, 1H), 7.05 (t, J = 8.1 Hz. 1H), 7.10 (s, 1H). 7.11 (s, 1H), 7.41 (d, J = 2.1 Hz. 1H), 8.01 (d, J = 2.1 Hz, 1H)
Ib-272	oil; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.05 (s, 3H), 2.07 (s, 3H), 2.19 (s, 3H), 3.85 (br s, 2H), 4.85 (d, J = 6.9Hz, 2H), 5.56 (m, 1H), 6.48 (dd, J = 2.1, 11.7 Hz, 1H), 6.53 (dd, J = 2.1, 8.4 Hz, 1H), 6.68 (s, 1H), 6.98 (s, 1H), 7.07 (t, J = 8.4 Hz. 1H), 7.10 (s. 1H), 7.92 (s, 1H)
Ib-273	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.805 (s, 3H), 1.810 (s, 3H), 2.06 (s, 3H), 2.26 (s, 3H). 2.28 (s, 3H), 3.74 (d, J = 6.6 Hz, 2H), 4.83-4.87 (m, 2H), 5.38 (m. 1H), 5.56 (m, 1H), 6.61 (d, J = 8.4 Hz, 1H), 6.68 (d, J = 9.0 Hz. 2H), 6.96 (s, 1H). 7.21 (d. J = 9.0 Hz, 2H). 7.34 (d. J = 8.4 Hz, 1H)
Ib-274	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.78 (s, 3H), 1.81 (s, 3H), 2.25 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 3.74 (d, J = 6.6 Hz, 2H), 4.89 (d, J = 6.9 Hz, 2H), 5.38 (m, 1H), 5.58 (m, 1H). 6.68 (d, J = 8.7 Hz, 2H), 7.09 (s, 1H), 7.15 (s. 1H), 7.20 (d, J = 8.7 Hz, 2H), 7.41 (m. 1H). 8.01 (m. 1H)
Ib-275	oil; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 6H), 1.81 (s, 3H), 2.05 (s, 3H), 2.07 (s, 3H), 2.28 (s, 3H), 3.74 (d, J = 6.9 Hz, 2H), 4.85 (d, J = 7.5 Hz, 2H), 5.38 (m, 1H), 5.56 (m, 1H), 6.67-6.71 (m, 3H), 6.96 (s, 1H), 7.12 (s, 1H), 7.21 (d. J = 8.7 Hz, 1H), 7.92 (s, 1H)
Ib-276	oil; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.81 (s, 3H), 2.05 (s, 3H), 2.06 (s, 3H), 2.26 (s, 3H), 3.75 (br, 2H), 4.84-4.87 (m, 2H). 5.57 (m, 1H), 6.62 (d, J = 8.1 Hz, 1H), 6.74-6.77 (m, 3H), 6.96 (s, 1H), 7.11 (s, 1H), 7.17-7.20 (m, 2H), 7.34 (d, J = 8.1 Hz. 1H)

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Ib-277	oil; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.81 (s, 3H), 2.25 (s, 3H), 2.27 (s, 3H), 2.28 (s, 3H), 4.90 (d, J = 6.8 Hz, 2H), 5.58 (m, 1H), 6.73-6.78 (m, 2H), 7.08-7.41 (m, 5H), 8.00 (d, J = 2.2 Hz, 1H)
Ib-278	oil; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.05 (s, 3H), 2.08 (s, 3H), 2.27 (s, 3H), 4.85 (d, J = 8.1 Hz, 2H), 5.57 (m, 1H), 6.68 (s, 1H), 6.75-6.78 (m, 2H), 6.97 (s, 1H), 7.12 (s, 1H), 7.17-7.21 (m, 2H), 7.92 (s, 1H)
Ib-279	mp 102-103 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 2.26 (s, 3H), 2.31 (s, 3H), 3.74 (d, J = 6.9Hz, 2H), 4.56-4.60 (m, 1H), 4.66-4.73 (m, 2H), 4.86-4.89 (m, 1H), 5.35-5.40 (m, 1H), 6.65-6.70 (m, 2H), 6.86 (d, J = 8.4Hz, 1H), 7.09 (s, 1H), 7.16 (s, 1H), 7.18-7.22 (m, 2H), 7.62 (dd, J = 2.4, 8.7Hz, 1H), 8.13-8.14 (m, 1H) IR (KBr): 3356, 2983, 2925, 1611, 1526, 1482, 1452, 1391, 1348, 1307, 1289, 1263, 1242, 1073, 1020 cm^{-1}
Ib-280	mp 81-82 °C; ^{1}H NMR ($CDCl_3$) δ 2.27 (s, 3H), 2.30 (s, 3H), 3.82-3.84 (m, 2H), 4.88-4.91 (m, 2H), 5.18-5.47 (m, 4H), 5.93-6.21 (m, 2H), 6.67-6.71 (m, 2H), 6.83 (d, J = 8.4Hz, 1H), 7.09 (s, 1H), 7.15 (s, 1H), 7.17-7.22 (m, 2H), 7.61 (dd, J = 2.4, 7.2Hz, 1H), 8.16 (dd, J = 0.9, 2.4Hz, 1H) IR (KBr): 3342, 3007, 2921, 1609, 1524, 1482, 1391, 1314, 1279, 1182, 1020, 996 cm^{-1}
Ib-281	mp 142-144 °C; ^{1}H NMR ($CDCl_3$) δ 2.20-2.27 (m, 4H), 2.29 (s, 3H), 2.50 (s, 1H), 3.99 (d, J = 2.4Hz, 1H), 5.04 (d, J = 2.7Hz, 1H), 6.73-6.78 (m, 2H), 6.87 (dd, J = 2.4, 8.7Hz, 1H), 7.10 (s, 1H), 7.16 (s, 1H), 7.21-7.26 (m, 2H), 7.63 (dd, J = 2.4, 8.7Hz, 1H), 8.18 (dd, J = 0.9, 2.4Hz, 1H) IR (KBr): 3360, 3292, 3266, 3005, 1608, 1523, 1479, 1438, 1391, 1299, 1280, 1265, 1233, 1022, 1010 cm^{-1}
Ib-282	mp 65-68 °C; ^{1}H NMR ($CDCl_3$) δ 1.58 (s, 3H), 1.70 (s, 3H), 1.73 (s, 3H), 1.78 (s, 3H), 2.23 (s, 3H), 2.26 (s, 3H), 2.43-2.50 (m, 2H), 2.87 (t, J = 7.5Hz, 2H), 3.71 (d, J = 6.9Hz, 2H), 3.79 (br s, 1H), 5.20-5.36 (m, 2H), 6.36-6.47 (m, 2H), 7.06 (t, J = 8.4Hz, 1H), 7.12 (s, 1H), 7.14 (s, 1H), 7.19 (d, J = 7.8Hz, 1H), 7.60 (dd, J = 2.1, 7.8Hz, 1H), 8.55 (d, J = 1.8Hz, 1H) IR (KBr): 3427, 3274, 2965, 2913, 2854, 1629, 1536, 1480, 1443, 1421, 1375, 1343, 1305, 1276, 1245, 1173, 1115, 1023 cm^{-1}
Ib-283	mp 112-113 °C; ^{1}H NMR ($CDCl_3$) δ 1.69 (s, 3H), 1.70 (s, 3H), 1.73 (s, 3H), 1.77 (s, 3H), 2.22 (s, 3H), 2.23 (s, 3H), 3.83-3.88 (m, 2H), 4.64 (d, J = 7.2Hz, 2H), 5.28-5.33 (m, 1H), 5.46-5.51 (m, 1H), 6.50-6.61 (m, 2H), 7.07-7.11 (m, 3H), 7.19-7.26 (m, 2H), 7.40 (dd, J = 2.7, 8.7Hz, 1H), 7.97 (d, J = 2.4Hz, 1H), IR (KBr): 3222, 2971, 2922, 2858, 1605, 1536, 1493, 1468, 1428, 1396, 1318, 1297, 1272, 1262, 1229, 1194, 1125, 1090, 996 cm^{-1}
Ib-284	mp 141-143°C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 6H), 1.82 (s, 3H), 2.28 (s, 3H), 2.29 (s, 3H), 3.85-3.95 (m, 2H), 4.56 (d, J = 6.6Hz, 2H), 5.36 (m, 1H), 5.54 (tm, J = 6.6Hz, 1H), 6.45 (m, 1H), 6.97 (d, J = 8.7Hz, 2H), 7.11 (s, 1H), 7.14 (s, 1H), 7.28 (d, J = 8.7Hz, 2H), 7.47 (m, 1H), 8.13 (m, 1H) ; IR (KBr) 3433, 3220, 1610, 1536, 1492, 1233, 1176, 998, 844 cm^{-1}.
Ib-285	mp 113-114 °C; ^{1}H NMR (DMSO-d6) δ 1.73 (s, 3H), 1.77 (s, 3H), 2.22 (s, 6H), 4.64 (d, J = 6.9Hz, 2H), 5.46-5.50 (m, 1H), 5.98 (s, 2H), 6.51 (d, J = 8.4Hz, 1H), 7.07-7.11 (m, 3H), 7.19-7.26 (m, 2H), 7.41 (dd, J = 2.7, 8.4Hz, 1H), 7.90 (d, J = 2.7Hz, 1H), IR (KBr): 3456, 3292, 3173, 2917, 1631, 1617, 1521, 1485, 1442, 1395, 1378, 1298, 1268, 1232, 1193, 1126, 1004 cm^{-1}

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Ib-286	mp 134-136°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.28 (s, 6H), 4.56 (d, J = 6.6Hz, 2H), 5.54 (tm, J = 6.6Hz, 1H), 6.58 (m, 1H), 6.98 (d, J = 9.0Hz, 2H), 7.10 (s, 1H), 7.14 (s, 1H), 7.28 (d, J = 9.0Hz, 2H), 7.48 (m, 1H), 8.10 (m, 1H) ; IR (KBr) 3458, 3300, 3176, 1630, 1614, 1519, 1485, 1238, 1003, 837 cm^{-1}.
Ib-287	mp 187-189°C; ^{1}H NMR ($CDCl_3$) δ 1.15-1.54 (m, 4H), 1.58-1.86 (m, 4H), 1.77 (s, 3H), 1.82 (s, 3H), 2.02-2.15 (m, 2H), 2.28 (s, 3H), 2.29 (s, 3H), 3.58 (m, 1H), 4.56 (d, J = 6.9Hz, 2H), 5.54 (tm, J = 6.9Hz, 1H), 5.54 (m, 1H), 6.44 (m, 1H), 6.97 (d, J = 8.7Hz, 2H), 7.10 (s, 1H), 7.13 (s, 1H), 7.28 (d, J = 8.7Hz, 2H), 7.45 (m, 1H), 8.10 (m, 1H) ; IR (KBr) 3334, 1612, 1519, 1488, 1231, 1006, 833 cm^{-1}.
Ib-288	mp 89-90 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 3.71 (d, J = 6.9Hz, 2H), 5.32-5.36 (m, 1H), 5.38 (s, 2H), 6.36-6.49 (m, 4H), 6.84 (dd, J = 0.6, 8.4Hz, 1H), 7.06 (t, J = 8.1Hz, 1H), 7.11 (s, 1H), 7.13 (s, 1H), 7.46-7.48 (m, 1H), 7.61 (dd, J = 2.4, 8.4Hz, 1H), 8.18 (dd, J = 0.9, 2.4Hz, 1H) IR (KBr): 3423, 2963, 2926, 2860, 1627, 1604, 1523, 1480, 1448, 1393, 1378, 1343, 1282, 1269, 1240, 1169, 1150, 1117, 1014, 1000 cm^{-1}
Ib-289	mp oil °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.90 (t, J = 2.1Hz, 3H), 2.22 (s, 3H), 2.26 (s, 3H), 3.71 (d, J = 6.9Hz, 2H), 4.99-5.01 (m, 2H), 5.33-5.37 (m, 1H), 6.37-6.47 (m, 2H), 6.86 (d, J = 8.4Hz, 1H), 7.03-7.13 (m, 3H), 7.61 (dd, J = 2.4, 8.4Hz, 1H), 8.17 (d, J = 2.1Hz, 1H)
Ib-290	mp 104-105 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 2.24 (s, 3H), 2.29 (s, 3H), 3.72(d, J = 6.9Hz, 2H), 5.33-5.36 (m, 1H), 6.37-6.78 (m, 4H), 7.06 (t, J = 8.4Hz, 1H), 7.14 (s, 1H), 7.16 (s, 1H), 7.38 (d, J = 8.4Hz, 1H), 7.56 (t, J = 2.4Hz, 1H), 7.77 (dd, J = 2.1, 8.1Hz, 1H), 8.45 (dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3396, 2976, 2929, 2855, 1626, 1596, 1573, 1523, 1482, 1378, 1367, 1335, 1130, 1065 cm^{-1}
Ib-291	mp 119-120 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 2.01-2.06 (m, 4H), 2.21 (s, 3H), 2.29 (s, 3H), 3.49-3.54 (m, 4H), 3.71 (d, J = 6.6Hz, 2H), 5.33-5.36 (m, 1H), 6.35-6.46 (m, 3H), 7.06 (t, J = 8.4Hz, 1H), 7.10 (s, 2H), 7.48 (dd, J = 2.7, 9.0Hz, 1H), 8.20 (d, J = 2.1Hz, 1H) IR (KBr): 3438, 2957, 2914, 2855, 1628, 1602, 1540, 1525, 1490, 1457, 1416, 1341, 1306, 1235, 1168, 1115 cm^{-1}.
Ib-292	Oil; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.27 (s, 3H), 2.30 (s, 3H), 4.56 (d, J = 6.9Hz, 2H), 5.55 (tm, J = 6.9Hz, 1H), 6.99 (d, J = 8.7Hz, 2H), 7.13 (s, 1H), 7.17 (s, 1H), 7.29 (d, J = 8.7Hz, 2H), 7.37 (m, 1H), 7.45 (m, H), 8.56-8.70 (m, 2H) ; IR ($CHCl_3$) 1672, 1607, 1514, 1494, 1471, 1450, 1383, 1234, 1230, 1174, 998, 978 cm^{-1}.
Ib-293	mp 114-115 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 2.26 (s, 3H), 2.31 (s, 3H), 3.74 (d, J = 6.9Hz, 2H), 3.99 (s, 3H), 5.35-5.44 (m, 1H), 6.65-6.70 (m, 2H), 6.81 (d, J = 8.4Hz, 1H), 7.10 (s, 1H), 7.16 (s, 1H), 7.17-7.22 (m, 2H), 7.60 (dd, J = 2.4, 8.4Hz, 1H), 8.18 (d, J = 2.1Hz, 1H) IR (KBr): 3333, 3006, 2968, 1612, 1524, 1483, 1387, 1367, 1319, 1300, 1288, 1240, 1024 cm^{-1}
Ib-294	mp 75-76 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 2.28(s, 3H), 2.31 (s, 3H), 3.76 (d, J=6.9Hz,2H), 4.17 (s, 2H), 5.39 (m, 1H), 6.75 (d, J=8.4Hz, 2H), 7.10-7.22 (m, 4H), 8.29 (d, J=2.4Hz, 1H), 8.42 (d, J=2.4Hz, 1H); IR ($CHCl_3$): 3426, 2923, 2868, 1613, 1557, 1530, 1499, 1478, 1427, 1381, 1353, 1301, 1245, 1093, 1007, 956, 929, 894 cm^{-1}

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Ib-295	mp 88-89 °C ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.28 (s, 6H), 4.64 (d, J=6.9Hz, 2H), 5.44 (s, 2H), 5.53-5.58(m, 1H), 6.89 (dd, J=0.6, 8.7Hz, 1H), 7.00-7.14 (m, 5H), 7.32-7.44 (m, 3H), 7.49-7.53 (m, 2H), 7.62 (dd, J=2.7, 8.7 Hz, 1H) 8.19 (dd, J= 0.6, 2.7 Hz, 1H) ; IR (nujol): 1602, 1285, 1129, 988, 836 cm^{-1}.
Ib-296	mp 110 °C ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.27 (s, 6H), 2.28 (s, 3H), 4.01 (s, 3H), 4.64 (d, J=6.9Hz, 2H), 5.53-5.58 (m, 1H), 6.82 (d , J=8.4Hz, 1H), 7.00-7.26 (m, 5H), 7.60 (dd, J=2.4, 8.4Hz, 1H), 8.18 (d, J=2.4 Hz, 1H), ; IR (nujol): 1598, 1283, 1273, 1124, 992, 838 cm^{-1}
Ib-297	mp 201-204 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 1.97 (s, 6H), 1.98 (s, 6H), 4.88 (d, J = 6.9Hz, 2H), 5.56-5.61 (m, 1H), 6.75-6.80 (m, 2H), 6.83 (d, J = 8.1Hz, 1H), 6.92-6.98 (m, 2H), 7.41 (dd, J = 2.4, 8.7Hz, 1H), 7.98 (d, J = 2.4Hz, 1H) IR (KBr): 3452, 3368, 2927, 1619, 1599, 1517, 1487, 1465, 1378, 1350, 1275, 1240, 1125, 980 cm^{-1}
Ib-298	mp 158-160 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.83 (s, 3H), 1.97 (s, 6H), 2.00 (s, 6H), 3.74 (d, J = 6.9Hz, 2H), 4.88 (d, J = 6.9Hz, 2H), 5.37-5.42 (m, 1H), 5.56-5.62 (m, 1H), 6.67-6.72 (m, 2H), 6.84 (d, J = 8.4Hz, 1H), 6.94-7.00 (m, 2H), 7.41 (dd, J = 2.4, 8.7Hz, 1H), 7.99 (dd, J = 0.6, 2.4Hz, 1H) IR (KBr): 3388, 2928, 2854, 1613, 1600, 1518, 1486, 1465, 1376, 1349, 1312, 1291, 1275, 1240, 1125, 983 cm^{-1}
Ib-299	mp 124-125 °C; ^{1}H NMR ($CDCl_3$) δ 1.25 (s, 3H), 1.27 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 1.97 (s, 6H), 2.00 (s, 6H), 3.62-3.75 (m, 1H), 4.88 (d, J = 6.9Hz, 2H), 5.56-5.62 (m, 1H), 6.64-6.68 (m, 2H), 6.83 (d, J = 8.4Hz, 1H), 6.93-6.98 (m, 2H), 7.41 (dd, J = 2.4, 8.4Hz, 2H), 7.99 (d, J = 1.8Hz, 1H) IR (KBr): 3391, 2965, 2930, 1613, 1600, 1519, 1412, 1376, 1362, 1349, 1316, 1277, 1242, 1181, 1125, 977 cm^{-1}
Ib-300	mp 116-119°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H); 1.82 (s, 3H); 1.97 (s, 12H); 4.01 (s, 3H); 4.64 (d, J = 6.6Hz, 2H); 5.58 (m, 1H); 6.82-6.87 (m, 2H); 6.91 (ddd, J = 1.8, 4.8, 11.7Hz, 1H); 7.05 (dt, J = 1.5, 8.7Hz, 1H); 7.41 (ddd, J = 1.5, 2.4, 8.7Hz, 1H); 7.99 (d, J = 2..4Hz, 1H); IR (KBr): 3432, 2944, 1603, 1514, 1496, 1462, 1297, 1281, 1263, 1245, 1210, 1113 cm^{-1}.
Ib-301	mp 150-153°C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H); 1.780 (s, 3H); 1.784 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.01 (s, 6H); 3.91 (t, J = 6.0Hz, 2H); 4.50 (br t, J = 4.5Hz, 1H); 4.64 (d, J = 6.9Hz, 2H); 5.38 (m, 1H); 5.57 (m, 1H); 6.49 (m, 1H); 6.84 (m, 1H); 6.91 (ddd, J = 2.1, 3.3, 12Hz, 1H); 7.04 (dt, J = 2.1, 8.4Hz, 1H); 7.27 (m, 1H); 7.91 (m, 1H); IR (KBr): 3235, 2917, 1608, 1540, 1513, 1381, 1294, 1261 cm^{-1}.
Ib-302	mp 155-157°C; ^{1}H NMR ($CDCl_3$) δ 1.30 (d, J = 6.3Hz, 6H); 1.78 (s, 3H); 1.83 (s, 3H); 1.96 (s, 6H); 2.01 (s, 6H); 3.92 (sept, J = 6.3Hz, 1H); 4.54 (br, 1H); 4.64 (d, J = 6.6Hz, 2H); 5.58 (m, 1H); 6.48 (d, J = 7.5Hz, 1H); 6.83-7.07 (m, 3H); 7.27 (m, 1H); 7.89 (m, 1H); IR (KBr): 3419, 3249, 2969, 1610, 1537, 1513, 1463, 1389, 1293, 1263, 1241, 1209, 1180, 1113 cm^{-1}.
Ib-303	mp 134-137°C; ^{1}H NMR ($CDCl_3$) δ 0.99-1.92 (m, 11H); 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.01 (s, 6H); 3.16 (t, J = 6.0Hz, 2H); 4.64 (d, J = 6.6Hz, 2H); 4.73 (br s, 1H); 5.57 (m, 1H); 6.49 (m, 1H); 6.82-6.94 (m, 2H); 7.04 (dt, J = 1.5, 7.8Hz, 1H); 7.27 (m, 1H); 7.88 (m, 1H); IR (KBr): 3425, 3250, 2925, 2852, 1607, 1533, 1512, 1448, 1294, 1261, 1240, 1211, 1115 cm^{-1}.

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Ib-304	mp 154-156°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.98 (s, 6H); 2.00 (s, 6H); 4.63 (d, J = 5.7Hz, 2H); 5.00 (br, 1H); 5.57 (m, 1H); 6.52 (dd, J = 2.4, 8.4Hz, 1H); 6.85-7.01 (m, 2H); 7.04 (dt, J = 1.8, 8.4Hz, 1H); 7.26-7.33 (m, 2H); 7.77 (m, 1H); 7.994 (m, 1H); 8.56 (m, 1H); 8.69 (br s, 1H); IR (KBr): 3256, 2917, 1603, 1514, 1463, 1427, 1381, 1296, 1263, 1239, 1210, 1112, 1004 cm^{-1}.
Ib-305	mp 127-129°C; ^{1}H NMR ($CDCl_3$) δ 0.99 (d, J = 6.6Hz, 6H); 1.50-1.80 (m, 3H); 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.01 (s, 6H); 3.29-3.36 (m, 2H); 4.53 (br t, 1H); 4.64 (d, J = 6.6Hz, 2H); 5.57 (m, 1H); 6.49 (d, J = 8.4Hz, 1H); 6.81-6.94 (m, 2H); 7.04 (dt, J = 1.5, 8.4Hz, 1H); 7.28 (m, 2H); 7.90 (m, 1H); IR (KBr): 3442, 3259, 2956, 1609, 1542, 1512, 1457, 1383, 1293, 1260, 1238, 1205, 1114 cm^{-1}.
Ib-306	mp 86-89°C; ^{1}H NMR ($CDCl_3$) δ 1.04 (d, J = 6.6Hz, 5H); 1.77 (s, 3H); 1.82 (s, 3H); 1.86-1.95 (m, 1H); 1.96 (s, 6H); 2.01 (s, 6H); 3.14 (t, J = 6.3Hz, 2H); 4.64 (d, J = 6.9Hz, 2H); 4.67 (br t, 1H); 5.57 (m, 1H); 6.49 (m, 1H); 6.82-7.07 (m, 3H); 7.28 (dt, J = 1.8, 8.4Hz, 1H); 7.89 (m, 1H); IR (KBr): 3343, 2957, 1610, 1513, 1465, 1382, 1294, 1263, 1240, 1114 cm^{-1}.
Ib-307	mp 157-159°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.00 (s, 6H); 4.64 (d, J = 6.6Hz, 2H); 4.77 (d, J = 5.4Hz, 2H); 4.94 (br, 1H); 5.57 (m, 1H); 6.56 (m, 1H); 6.81-7.09 (m, 5H); 7.24-7.30 (m, 2H); 7.96 (d, J = 2.4Hz, 1H); IR (KBr): 3393, 2925, 1610, 1512, 1295, 1263, 1240 cm^{-1}.
Ib-308	mp 175-177°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.00 (s, 6H); 4.58 (d, J = 6.0Hz, 2H); 4.64 (d, J = 6.9Hz, 2H); 4.98 (br s, 1H); 5.57 (m, 1H); 6.54 (m, 1H); 6.81-6.94 (m, 2H); 7.04 (dt, J = 1.8, 8.4Hz, 1H); 7.14 (dd, J = 1.8, 5.1Hz, 1H); 7.27 (m, 1H); 7.35 (dd, J = 3.0, 4.8Hz, 1H); 7.94 (m, 1H); IR (KBr): 3233, 2912, 1546, 1512, 1453, 1420, 1384, 1317, 1294, 1259, 1238, 1204, 1116 cm^{-1}.
Ib-309	mp 134-137°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.98 (s, 6H); 2.00 (s, 6H); 4.58 (d, J = 5.4Hz, 2H); 4.64 (d, J = 6.6Hz, 2H); 4.88 (br t, 1H); 5.57 (m, 1H); 6.30 (dd, J = 0.9, 3.0Hz, 1H), 6.36 (dd, J = 4.2, 6.3Hz, 1H); 6.57 (m, 1H); 6.86 (m, 1H); 6.91 (ddd, J = 2.1, 3.6, 11.7Hz, 1H); 7.03 (dt, J = 1.8, 8.4Hz, 1H); 7.28 (m, 1H); 7.40 (m, 1H); 7.94 (m, 1H); IR (KBr): 3379, 2928, 1513, 1294, 1263, 1240 cm^{-1}.
Ib-310	mp 124-126°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.97 (s, 6H); 2.00 (s, 6H); 4.41 (d, J = 5.4Hz, 2H); 4.64 (d, J = 6.3Hz, 2H); 4.73 (br t, 1H); 5.57 (m, 1H); 6.47 (m, 1H), 6.54 (m, 1H), 6.82-7.08 (m, 3H), 7.27 (m, 1H), 7.43 (t, J = 1.8Hz, 1H), 7.46 (m, 1H); 7.94 (d, J = 2.4Hz, 1H); IR (KBr): 3456, 3236, 2254, 1605, 1512, 1468, 1382, 1293, 1261, 1240, 1209, 1114 cm^{-1}.
Ib-311	mp 143-145°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H); 1.82 (s, 3H); 1.97 (s, 6H); 2.00 (s, 6H); 4.64 (d, J = 7.0Hz, 2H); 4.74 (d, J = 5.2Hz, 2H); 5.58 (m, 1H); 5.76 (m, 1H), 6.61 (d, J = 8.4Hz, 1H); 6.82-7.29 (m, 4H); 7.40 (d, J = 8.0Hz, 1H); 7.70 (m, 1H); 7.95 (d, J = 2.0Hz, 1H); 8.61 (d, J = 4.8Hz, 1H); IR (KBr): 3251, 2929, 1608, 1514, 1440, 1380, 1295, 1264, 1252, 1240, 1207 cm^{-1}.
Ib-312	mp 166-167°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 1.99 (s, 6H); 4.51 (br s, 2H); 4.64 (d, J = 6.6Hz, 2H); 5.57 (m, 1H); 6.62 (m, 1H); 6.84 (m, 1H); 6.90 (m, 1H); 7.04 (m, 1H); 7.27 (m, 1H); 7.90 (m, 1H); IR (KBr): 3467, 3304, 3168, 2917, 1638, 1619, 1516, 1388, 1297, 1265, 1240, 1209 cm^{-1}.

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Ib-313	amorphous; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 1.98 (s, 6H), 2.01 (s, 6H), 3.69 (br s, 1H), 3.91 (t, J = 5.6 Hz, 2H), 4.64 (br s, 1H), 5.38 (t, J = 6.9 Hz, 1H), 6.50 (d, J = 8.7 Hz, 1H), 6.75-6.79 (m, 2H), 6.92-6.97 (m, 2H), 7.30 (dd, J = 8.7, 2.1 Hz, 1H), 7.91 (d, J = 2.1 Hz, 1H), 7.56 (dd, J = 9.3, 2.4 Hz, 1H); IR (KBr): 3447, 3414, 3364, 1605, 1518, 1464, 1377, 1278, 819 cm^{-1}
Ib-314	mp 172-173 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 6H), 1.78 (s, 3H), 1.78 (s, 3H), 2.00 (s, 6H), 2.01 (s, 6H), 3.4 (br s, 1H), 3.74 (d, J = 6.6 Hz, 2H), 3.91 (t, J = 6.0 Hz, 2H), 4.53 (br s, 1H), 5.35-5.42 (m, 2H), 6.49 (dd, J = 8.4, 0.9 Hz, 1H), 6.67-6.71 (m, 2H), 6.94-7.00 (m, 2H), 7.29 (dd, J = 8.4, 2.4 Hz, 1H), 7.93 (dd, J = 2.4, 0.9 Hz, 1H); IR (KBr): 3415, 3229, 1606, 1521, 1465, 1379, 1315, 1141, 985, 815 cm^{-1}
Ib-315	mp 207-209 °C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 3H), 1.76 (s, 3H), 1.96 (s, 6H), 1.98 (s, 6H), 3.4 (br s, 1H), 3.88 (d, J = 7.8 Hz, 2H), 5.42 (t, J = 7.8 Hz, 1H), 6.76-6.82 (m, 2H), 6.92-6.98 (m, 2H), 7.26 (d, J = 7.8 Hz, 1H), 7.34 (dd, J = 7.8, 2.1 Hz, 1H), 8.29 (d, J = 2.1 Hz, 1H); IR (KBr): 3452, 3367, 1619, 1517, 1457, 1353, 1280, 1176, 1107, 820, 540 cm^{-1}
Ib-316	mp 156-158 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.76 (s, 3H), 1.76 (s, 3H), 1.78 (s, 3H), 1.97 (s, 6H), 2.00 (s, 6H), 3.75 (d, J = 6.6 Hz, 2H), 3.88 (d, J = 7.7 Hz, 2H), 5.40 (t, J = 6.6 Hz, 2H), 5.42 (t, J = 7.7 Hz, 1H), 6.68-6.73 (m, 2H), 6.93-7.00 (m, 2H), 7.26 (dd, J = 8.1, 1.1 Hz, 1H), 7.34 (dd, J = 8.1, 2.1 Hz, 1H), 8.29 (dd, J = 2.1, 1.1 Hz, 1H); IR (KBr): 3391, 1612, 1518, 1462, 1180, 1108, 820, 807, 546 cm^{-1}.
Ib-317	mp 161-164 °C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.77 (s, 3H), 1.99 (s, 6H), 1.99 (s, 6H), 2.11 (s, 6H), 3.89 (d, J = 7.8 Hz, 2H), 5.43 (t, J = 7.8 Hz, 1H), 5.94 (s, 2H), 7.21-7.39 (m, 6H), 8.31 (dd, J = 2.3, 0.8 Hz, 1H); IR (KBr): 3439, 1586, 1520, 1449, 1406, 1110, 999, 824, 750, 565 cm^{-1}
Ib-318	mp 137-138 °C, ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 6H), 1.81 (s, 3H), 1.82 (s, 3H), 1.89 (s, 6H), 1.98 (s, 6H), 2.15 (s, 3H), 3.75 (d, J = 6.9 Hz, 2H), 4.86 (d, J = 7.2 Hz, 2H), 5.40 (m, 1H), 5.59 (m, 1H), 6.64-6.71 (m, 3H), 6.94-6.99 (m, 2H), 7.26 (d, J = 8.4 Hz, 1H). IR (KBr): 3412, 2914, 1611, 1592, 1460, 1311, 1297, 1282, 1237 cm^{-1}
Ib-319	mp 129-130 °C, ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 1.98 (s, 6H), 1.99 (s, 6H), 2.25 (s, 3H), 3.75 (d, J = 6.9 Hz, 2H), 4.90 (d, J = 6.6 Hz, 2H), 5.40 (br t, J = 6.9 Hz, 1H), 5.59 (br t, J = 6.9 Hz, 1H), 6.70 (m, 2H), 6.97 (m, 2H), 7.23 (d, J = 2.1 Hz, 1H), 7.82 (d, J = 2.1 Hz, 1H)
Ib-320	mp 153-154 °C, ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 6H), 1.83 (s, 3H), 1.89 (s, 6H), 1.96 (s, 3H), 1.99 (s, 6H), 2.15 (s, 3H), 3.75 (d, J = 6.9 Hz, 2H), 4.86 (d, J = 6.9 Hz, 2H), 5.40 (m, 1H), 5.58 (m, 1H), 6.69-6.73 (m, 3H), 6.94-7.01 (m, 2H), 7.84 (s, 1H). IR (KBr): 3386, 2928, 1608, 1518, 1464, 1377, 1315, 1180, 1122, 1028 cm^{-1}
Ib-321	mp 115-117 °C; ^{1}H NMR ($CDCl_3$) δ 1.60 (s, 3H), 1.73 (s, 3H), 1.75 (s, 3H), 1.78 (s, 3H), 1.95 (s, 6H), 2.01 (s, 6H), 3.60 (d, J = 7.7 Hz, 2H), 3.91 (t, J = 6.0 Hz, 2H), 4.52 (m, 1H), 5.32-5.42 (m, 2H), 6.49 (d, J = 8.4 Hz, 1H), 7.05-7.11 (m, 2H), 7.28 (dd, J = 8.4, 2.3 Hz, 1H), 7.39-7.44 (m, 2H), 7.91 (d, J = 2.3 Hz, 1H); IR (KBr): 3425, 1609, 1541, 1391, 1378, 814, 550 cm^{-1}

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Ib-322	mp 119-122 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.77 (s. 3H), 1.78 (s, 3H), 1.82 (s, 3H), 2.01 (s, 6H), 2.03 (s, 3H), 3.34 (s, 3H), 3.91 (dd, J=5.9, 5.9Hz, 2H), 4.51 (t, J=5.2Hz, 1H), 4.64 (d, J=6.7Hz, 2H), 5.38 (m, 1H), 5.57 (m, 1H), 6.47 (d, J=8.5Hz, 1H), 6.97-7.08 (m, 3H), 7.23-7.28 (m, 1H), 7.72 (d, J=1.8Hz, 1H) ; IR (nujor): 3325, 1926, 2853, 1608, 1538, 1514, 1457, 1389, 1296, 1262, 1214, 1110, 1006 cm^{-1}
Ib-323	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (d, J = 0.9 Hz, 3H), 1.83 (d, J = 0.9 Hz, 3H), 1.98 (s, 6H), 2.06 (s, 3H), 3.32 (s, 3H), 4.88 (d, J = 6.9 Hz, 2H), 5.55-5.62 (m, 1H), 6.80 (d, J = 7.8 Hz, 2H), 6.85 (dd, J = 8.6, 0.8 Hz, 1H), 7.11 (d, J = 7.8 Hz, 2H), 7.40 (dd, J = 8.6, 2.6 Hz, 1H), 7.98 (dd, J = 2.6, 0.8 Hz, 1H)
Ib-324	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 1.98 (s, 3H), 2.07 (s, 3H), 3.33 (s, 3H), 3.75 (d, J = 6.6 Hz, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.36-5.43 (m, 1H), 5.55-5.62 (m, 1H), 6.71 (d, J = 8.0 Hz, 2H), 6.84 (dd, J = 2.4, 0.8 Hz, 1H), 7.30 (d, J = 8.0 Hz, 2H), 7.40 (dd, J = 8.6, 2.4 Hz, 1H), 7.98 (dd, J = 2.4, 0.8 Hz, 1H)
Ib-325	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 1.97 (s, 6H), 2.06 (s, 3H), 3.32 (s, 3H), 3.92 (s, 3H), 4.46 (s, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.55-5.62 (m, 1H), 6.71 (d, J = 8.0 Hz, 2H), 6.84 (d, J = 8.4 Hz, 1H), 7.12 (d, J = 8.0 Hz, 2H), 7.40 H, dd, J = 8.4, 2.2 Hz, 1H), 7.50 (d, J = 8.1 Hz, 2H), 7.98 (d, J = 2.2 Hz. 1H), 8.04 (d, J = 8.1Hz, 2H)
Ib-326	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s 3H), 1.97 (s, 6H), 2.06 (s, 3H), 3.32 (s, 3H), 4.48 (s, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.55-5.61 (m, 1H), 6.70 (d, J = 7.8Hz, 2H), 6.85 (d, J = 8.4 Hz, 1H), 7.12 (d, J = 7.8 Hz, 2H), 7.40 (dd, J = 8.4, 0.7 Hz, 1H), 7.53 (d, J = 8.1 Hz, 2H), 7.99 (d, J = 0.7 Hz, 1H), 8.11 (d, J = 8.1 Hz, 2H)
Ib-327	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s. 3H), 1.98 (s, 3H), 2.07 (s, 3H), 3.32 (s, 3H), 3.86 (s, 3H), 3.87 (s, 6H), 4.33 (s, 2H), 4.88 (s, J = 6.6 Hz, 2H), 5.55-5.60 (m, 1H), 6.67 (s, 2H), 6.76 (d, J = 7.1 Hz, 2H), 6.85 (dd, J = 8.4, 0.6 Hz, 1H), 7.15 (d, J = 7.1 Hz, 2H), 7.40 (dd, J = 8.4, 2.4 Hz, 1H), 7.98 (dd, J = 2.4, 0.6 Hz, 1H)
Ib-328	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 1.97 (s, 6H), 2.06 (s, 3H), 3.31 (s, 3H), 4.38 (s, 2H), 4.88 (d, J = 7.2 Hz, 2H), 5.55-5.62 (m, 1H), 6.29 (d, J = 3.0 Hz, 1H), 6.35 (dd, J = 3.0, 1.8 Hz, 1H), 6.77 (d, J = 8.1 Hz, 2H), 6.84 (dd, J = 8.2, 0.6 Hz, 1H), 7.14 (d, J = 8.1 Hz, 2H), 7.399 (dd, J = 1.8, 0.8 Hz, 1H), 7.40 (dd, J = 8.2, 2.4 Hz, 1H), 7.98 (dd, J = 2.4, 0.6 Hz, 1H)
Ib-329	mp 110-111 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 1.98 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 4.88 (d, J = 6.9 Hz, 2H), 5.59 (m, 1H), 6.79 (d, J = 8.7 Hz,2H), 6.84 (dd, J = 8.4 and J = 0.9 Hz,1H), 6.95 (d, J = 7.2 Hz, 2H), 7.56 (dd, J = 8.4 and 2.7 Hz, 1H), 8.11 (dd, J = 2.4 and 0.6 Hz, 1H) ; IR ($CHCl_3$): 3462, 3016, 2934, 1620, 1604. 1279, 1241, 1087. 982, cm^{-1}.
Ib-330	mp 115-116 °C; ^{1}H NMR ($CDCl_2$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 2.00 (s,6H), 2.06 (s, 3H) 3.33 (s, 3H), 3.75 (d, J = 6.6 Hz, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.39 (m,1H), 5.59 (m, 1H), 6.71 (d, J = 7.8 Hz, 2H), 6.84 (dd, J = 8.4 and 0.6 Hz, 1H), 6.97 (d, J = 7.5 Hz, 2H),7.56 (dd, J = 8.4 and 2.4 Hz, 1H), 8.11 (dd ,J = 2.4 and 0.9 Hz, 1H) ; IR ($CHCl_3$): 3424, 3004. 2975. 2934. 2860. 1612, 1491. 1402. 1377.1280. 1241. cm^{-1}.

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Ib-331	mp 111-112 °C; ^{1}H NMR ($CDCl_3$) δ 1.26 (s, 3H), 1.28 (s, 3H), 1.79 (s, 3H), 1.83 (s, 3H), 2.00 (s,6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.68 (m, 1H), 4.88 (d, J = 6.9Hz,2H), 5.59 (m, 1H), 6.67 (d, J = 8.4 Hz, 2H), 6.84 (dd, J = 8.4 and 6.0 Hz, 1H), 6.95 (d, J = 7.2 Hz, 2H),7.56 (dd, J = 8.4 and 2.4 Hz,1H), 8.12 (dd, J = 2.4 and 0.6 Hz, 1H) ; IR ($CHCl_3$): 3423, 3018, 2975, 2934, 2872, 1612, 1354, 1317. 1377,1280, 1242, cm^{-1}.
Ib-332	mp 139-140 °C; ^{1}H NMR ($CDCl_3$) δ 1.14-1.46 (m 5H), 1.65-1.80 (m 3H),1.82 (s, 3H), 1.83 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 2.10-2.15 (m, 2H), 3.30 (m, 1H), 4.88 (d, J = 7.2 Hz, 2H), 5.59 (m, 1H), 6.87 (d, J = 8.7 Hz, 2H), 6.84 (dd, J = 8.7 and 0.9 Hz, 1H),6.94 (d, J = 7.2 Hz, 2H), 7.56 (dd, J = 8.7 and 2.7 Hz,1H), 8.11 (dd, J = 2.7 and 0.9 Hz, 1H) ; IR ($CHCl_3$): 3422, 3002, 2933, 2856, 1612, 1354, 1318, 1280, 1242.1130, 1087, cm^{-1}.
Ib-333	mp 155-156 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 1.99 (s,6H), 2.06 (s, 3H), 3.33 (s, 3H), 4.38 (s, 2H), 4.89 (d, J = 6.9 Hz, 2H), 5.59 (m, 1H), 6.30 (m, 1H), 6.35-6.37 (m, 1H), 6.77 (d, J =8.4 Hz, 2H), 6.83 (dd, J = 8.4 and 0.9 Hz, 1H),6.98 (d, J = 7.5 Hz, 2H), 7.40 (dd, J = 2.1 and 0.9 Hz, 1H) 7.57 (dd, J = 8.7 and 2.7 Hz,1H) 8.12 (dd, J =2.4 and 0.6 Hz, 1H) ; IR ($CHCl_3$): 3424, 2934, 2861, 1613, 1280, 1241, 1217, cm^{-1}.
Ib-334	mp 142-145 °C: ^{1}H NMR ($CDCl_3$) δ 1.99 (s, 3H), 2.06 (s, 3H), 3.33 (s, 3H), 3.79 (brs, 2H), 5.40 (s, 2H), 6.40 (dd, J=2.0, 3.2Hz, 1H), 6.49 (d, J=3.3Hz, 1H), 6.78 (d, J=8.4Hz, 2H), 6.87 (dd, J=0.8, 8.3Hz, 1H), 6.95 (brd, J=7.2Hz, 2H), 7.47 (dd, J=0.9, 1.5Hz, 1H), 7.58 (dd, J=2.6, 8.6Hz, 1H), 8.13 (dd, J=0.8, 2.6Hz, 1H) ; IR (nujor): 3342, 2924, 2854, 1611,1523, 1493, 1458, 1283, 1011, 824 cm^{-1}
Ib-335	mp 158-159 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 4.38 (s, 2H), 4.89 (d, J=7.0Hz, 2H), 5.59 (m, 1H), 6.74 (d, J=8.6Hz, 2H), 6.84 (dd, J=0.7, 8.4Hz, 1H), 6.98 (brd, J=6.9Hz, 2H), 7.28-7.46 (m, 5H), 7.56 (dd, J=2.5, 8.5Hz, 1H), 8.12 (dd, J=0.7, 2.3Hz, 1H) , IR (nujor): 3357, 2926, 2854, 1613, 1526, 1491, 1452, 1279, 1090, 997, 823, 732 cm^{-1}
Ib-336	mp 116-117 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 2.30 (s, 3H), 3.33 (s, 3H), 4.31 (s, 2H), 4.88 (d, J=6.9Hz, 2H), 5.59 (m, 1H), 5.93 (m, 1H), 6.17 (d, J=3.1Hz, 1H), 6.76 (d, J=8.6Hz, 2H), 6.84 (d, J=8.5Hz, 1H), 6.98 (brd, J=6.7Hz, 2H), 7.56 (dd, J=2.3, 8.5Hz, 1H), 8.12 (d, J=2.3Hz, 1H) , IR (nujor): 3349, 2925, 2854, 1611, 1525, 1490, 1455, 1280, 1240, 979, 822. 782 cm^{-1}
Ib-337	mp 94-97 °C; ^{1}H NMR ($CDCl_3$) δ 1.66 (brd, J=6.7Hz, 3H), 1.73 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 1.99 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.69 (brs, 2H), 4.88 (d, J=6.9Hz, 2H), 5.52-5.62 (m, 2H), 6.70 (d, J=8.6Hz, 2H), 6.83 (dd, J=0.7, 8.4Hz, 1H), 6.95 (brd, J=7.4Hz, 2H), 7.56 (dd, J=2.5, 8.5Hz, 1H), 8.11 (dd, J=0.7, 2.3Hz, 1H) , IR (KBr): 3409, 3325, 2927, 2857, 1612, 1523, 1457, 1279, 1085, 1002, 986, 820 cm^{-1}
Ib-338	mp 161-163 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.86 (s, 3H), 3.87 (s, 6H), 4.42 (s, 2H), 4.88 (d, J=7.0Hz, 2H), 5.59 (m, 1H), 6.66 (s, 2H), 6.75 (d, J=8.6Hz, 2H), 6.84 (dd, J=0.6, 8.5Hz, 1H), 6.99 (brd, J=6.7Hz, 2H), 7.56 (dd, J=2.4, 8.4Hz, 1H), 8.12 (dd, J=0.6, 2.3Hz, 1H) , IR (KBr): 3373, 2934, 2831, 1604, 1592, 1522, 1457, 1280, 1240, 1124, 981, 822 cm^{-1}

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Ib-339	mp 113-115 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (d, J=0.9Hz, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.75 (d, J=6.7Hz, 2H), 4.83 (dd, J=5.3Hz, 2H), 5.39 (m, 1H), 5.78-5.96 (m, 2H), 6.70 (d, J=8.6Hz, 2H), 6.84 (dd, J=0.7, 8.5Hz, 1H), 6.97 (brd, J=7.3Hz, 2H). 7.57 (dd, J=2.4, 8.4Hz, 1H), 8.11 (dd, J=0.7, 2.5Hz, 1H) ; IR (nujor): 3367, 2924, 2853, 1611, 1520, 1457, 1278, 1241, 992, 820 cm^{-1}
Ib-340	mp 90-92 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 2.59 (dt, J=6.7, 6.7Hz), 3.33 (s, 3H), 3.75 (d, J=6.9Hz, 2H), 4.42 (t, J=6.8Hz, 2H), 5.12 (brd, J=10.2Hz, 1H), 5.20 (ddt, J=1.6, 1.6, 17.2Hz, 1H), 5.39 (m, 1H), 5.96 (ddt, J=6.7, 10.3, 17.1Hz, 1H), 6.70 (d, J=8.6Hz, 2H), 6.83 (dd, J=0.7, 8.4Hz, 1H), 6.96 (brd, J=6.9Hz, 2H), 7.57 (dd, J=2.3, 8.5Hz, 1H), 8.11 (dd, J=0.7, 2.4Hz, 1H) ; IR (nujor): 3362, 2952, 2925, 2854, 1611, 1604, 1519, 1466, 1280, 819 cm^{-1}
Ib-341	mp 97-98 °C; ^{1}H NMR ($CDCl_3$) δ 1.04 (t, J=7.5Hz, 3H), 1.75 (s, 3H), 1.78 (s, 3H), 2.00 (s, 6H), 2.06 (s, 3H), 2.22 (dq, J=7.0, 7.1Hz, 2H), 3.33 (s, 3H), 3.75 (d, J=6.9Hz, 2H), 4.95 (d, J=5.3Hz, 2H), 5.39 (m, 1H), 5.71 (dt, J=6.1, 11.0Hz, 1H), 5.75 (dt, J=6.1, 10.8Hz, 1H), 6.70 (d, J=8.8Hz, 2H), 6.84 (dd, J=0.7, 8.5Hz, 1H), 6.97 (brd, J=6.9Hz, 2H), 7.57 (dd, J=2.4, 8.4Hz, 1H), 8.12 (dd, J=0.7, 2.5Hz, 1H) , IR (KBr): 3341, 2965, 2930, 1612, 1523, 1491, 1456, 1281, 1243, 1089, 991, 822 cm^{-1}
Ib-342	mp 129-130°C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.92 (t, J = 2.1 Hz 3H), 2.00 (s, 6H), 2.05 (s, 3H), 3.32 (s, 3H), 3.75 (d, J = 6.6 Hz, 2H), 5.02 (m, 2H), 5.40 (m, 1H), 6.72 (d, J = 8.4Hz, 2H), 6.89 (dd, J = 8.4 and 0.6 Hz, 1H), 6.97 (d, J = 7.2 Hz, 2H), 7.59 (dd, J = 8.4 and 2.4 Hz, 1H), 8.12 (dd, J = 2.4 and 0.6 Hz, 1H) ; IR ($CHCl_3$): 3424, 3004, 2933, 2858, 1612, 1346, 1279, 1241, cm^{-1}.
Ib-343	mp 137-138 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 2.00 (s,6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.75 (d, J =6.9 Hz, 2H), 5.40 (m, 3H), 6.40 (dd, J = 3.3 and 1.8 Hz, 1H), 6.49 (d, J = 3.3 Hz, 1H), 6.70 (d, J = 8.7 Hz, 2H), 6.87 (dd, J = 9.0 and 0.6 Hz, 1H), 6.97 (d, J =7.5 Hz, 2H), 7.47 (dd, J = 1.8 and 0.9 Hz, 1H),7.59 (dd, J = 8.4 and 2.4 Hz, 1H), 8.13 (dd, J = 2.4 and 0.6 Hz, 1H) ; IR ($CHCl_3$): 3424; 3004, 2933, 2860, 1612, 1402, 1453, 1346, 1280, cm^{-1}.
Ib-344	mp 144-146 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.84 (s, 3H), 1.85 (t, J=2.4Hz, 3H), 2.00 (s, 6H), 2.07 (s, 3H), 3.34 (s, 3H), 3.94 (q, J=2.4Hz, 2H), 4.89 (d, J=6.9Hz, 2H), 5.60 (m, 1H), 6.76 (d, J=8.4Hz, 2H), 6.85 (d, J=8.4Hz, 1H). 7.00 (brd, J=7.5Hz, 2H), 7.57 (dd, J=2.4, 8.4Hz, 1H), 8.13 (d, J=2.4Hz, 1H) ; IR ($CHCl_3$): 3451, 3395, 3024, 3015, 2934, 1621, 1604, 1518, 1491, 1280, 993, 825 cm^{-1}
Ib-345	mp 113-115 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.77 (s, 3H), 2.00 (s, 6H), 2.05 (s, 3H), 3.32 (s, 3H), 3.75 (d, J=6.7Hz, 2H), 4.64 (dd, J=3.9, 29.2Hz, 1H), 4.66 (dd, J=2.9, 29.2Hz, 1H), 4.81 (dd, J=3.0, 47.5Hz, 1H), 4.82 (dd, J=3.9, 47.4Hz, 1H), 5.40 (m, 1H), 6.70 (d, J=8.6Hz, 2H), 6.90 (dd, J=0.7, 8.4Hz, 1H), 6.96 (brd, J=7.5Hz, 2H), 7.59 (dd, J=2.4, 8.4Hz, 1H), 8.09 (dd, J=0.7, 2.5Hz, 1H) ; IR (nujor): 3399, 2925, 2854, 1612, 1519, 1491, 1450, 1283, 1087, 929 cm^{-1}

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Ib-346	mp 111-112 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 2.00 (s, 6H), 2.05 (s, 3H), 3.32 (s, 3H), 3.75 (d, J=6.9Hz, 2H), 4.82 (dq, J=1.4, 8.6Hz, 2H), 5.39 (m, 1H), 6.70 (d, J=8.7Hz, 2H), 6.93-6.97 (m, 3H), 7.64 (dd, J=2.4, 8.4Hz, 1H), 8.10 (dd, J=0.3, 2.1Hz, 1H) , IR (KBr): 3407, 2931, 2860, 1613, 1521, 1292, 1274, 1259, 1240, 1164, 1070, 823 cm^{-1}
Ib-347	mp 154-156 °C; ^{1}H NMR ($CDCl_3$) δ 1.85 (t, J=2.6Hz, 3H), 1.99 (s, 6H), 2.06 (s, 3H), 3.33 (s, 3H), 3.93 (q, J=2.4Hz, 2H), 5.40 (s, 2H), 6.40 (dd, J=1.7, 3.2Hz, 1H), 6.49 (dd, J=0.9, 3.0Hz, 1H), 6.76 (d, J=8.7Hz, 2H), 6.87 (dd, J=0.9, 8.7Hz, 1H), 6.99 (brd, J=7.5Hz, 2H), 7.48 (dd, J=0.9, 1.8Hz, 1H), 7.58 (dd, J=2.6, 8.6Hz, 1H), 8.14 (dd, J=0.6, 2.4Hz, 1H) , IR (KBr): 3410, 2989, 2934, 2860, 1610, 1520, 1278, 1242, 992, 822, 742 cm^{-1}
Ib-348	mp 165-168 °C; ^{1}H NMR ($CDCl_3$) δ 1.85 (t, J=2.4Hz, 3H), 1.91 (t, J=2.4Hz, 3H), 1.99 (s, 6H), 2.05 (s, 3H), 3.32 (s, 3H), 3.93 (q, J=2.4Hz, 2H), 5.01 (q, J=2.4Hz, 2H), 6.76 (d, J=8.7Hz, 2H), 6.89 (dd, J=0.8, 8.6Hz, 1H), 6.99 (brd, J=7.2Hz, 2H), 7.58 (dd, J=2.4, 8.4Hz, 1H), 8.12 (dd, J=0.6, 2.4Hz, 1H) , IR (KBr): 3393, 3338, 2923, 2862, 2237, 1612, 1604, 1521, 1279, 1243, 996, 824 cm^{-1}
Ib-349	mp 172-173°C; ^{1}H NMR ($CDCl_3$) δ 1.74(s, 3H),, 1.78 (s, 3H), 2.05 (s, 3H), 2.30 (s, 6H), 2.63 (s, 3H), 3.32 (s, 3H), 2.30 (s, 6H), 3.74 (d, J = 6.6 Hz, 2H), 5.39 (m, 1H), 6.70 (d, J = 8.7 Hz, 2H), 6.96 (d, J = 6.6 Hz, 2H), 7.27 (dd, J = 8.4 and 0.6 Hz, 1H), 7.51 (dd, J = 8.1 and 2.1 Hz, 1H), 7.42 (dd, J = 2.1 and 0.9 Hz, 1H), ; IR ($CHCl_3$): 3423, 3003, 2931, 28598, 1613, 1589, 1315, 14021, 1289, cm^{-1}.
Ib-350	mp 183-184°C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 3H), 2.01 (s,6H), 2.03 (s, 3H), 3.32 (s, 3H), 3.33 (s, 3H), 3.75 (d, J = 6.9Hz, 2H), 5.40 (m, 1H), 6.72 (d, J = 8.7Hz, 2H), 6.75 (d, J = 8.1 Hz, 2H), 7.98 (dd, J = 8.1 and 2.1 Hz, 1H), 8.17 (dd, J = 8.1 and 0.9 Hz, 1H), 8.70 (dd, J = 2.7 and 0.6 Hz, 1H), ; IR ($CHCl_3$): 3424, 3016, 2934, 2860, 1613, 1315, 1292, 1231, cm^{-1}.
Ib-351	mp 148-149 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.83 (s, 3H), 2.05 (s, 3H), 2.06 (s, 3H), 3.33 (s, 3H), 3.34 (s, 3H), 4.88 (d, J = 6.9Hz, 2H), 5.58 (m, 1H), 6.78 (d, J = 8.7Hz, 2H), 6.84 (d, J = 8.4Hz, 1H), 7.11 (d, J = 8.7Hz, 2H), 7.56 (dd, J = 8.4, 2.4Hz, 1H), 8.12 (d, J = 2.4Hz, 1H) IR (KBr): 3393, 1603, 1520, 1492, 1459, 1399, 1373, 1357, 1282, 1247, 1128, 1038, 1020, 982, 824cm^{-1}
Ib-352	mp 106-107 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 2.07 (s, 3H), 2.08 (s, 3H), 3.33 (s, 3H), 3.34 (s, 3H), 3.75 (d, J = 6.6Hz, 2H), 4.88 (d, J = 7.2Hz, 2H), 5.38 (m, 1H), 5.58 (m, 1H), 6.70 (d, J = 8.4Hz, 2H), 6.84 (d, J = 8.4Hz, 1H), 7.12 (d, J = 8.4Hz, 2H), 7.56 (dd, J = 8.4, 2.4Hz, 1H), 8.12 (d, J = 2.4Hz, 1H) IR (KBr): 3401, 1614, 1603, 1561, 1522, 1491, 1463, 1281, 1242, 1182, 1128, 1037, 985, 821 cm^{-1}
Ib-353	mp 126-127 °C; ^{1}H NMR ($CDCl_3$) δ 1.49 (s, 3H), 1.67 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 2.02 (s, 3H), 2.07 (s, 3H), 2.81 (d, J = 5.4Hz, 3H), 3.30 (s, 3H), 3.34 (s, 3H), 4.17 (q, J = 5.4Hz, 2H), 4.27 (d, J = 7.2Hz, 2H), 4.89 (d, J = 7.2Hz, 2H), 5.29 (m, 1H), 5.58 (m, 1H), 6.85 (d, J = 8.4Hz, 1H), 7.32 (d, J = 4.2Hz, 2H), 7.44 (d, J = 4.2Hz, 2H), 7.59 (dd, J = 8.4, 2.4Hz, 1H), 8.11 (d, J = 2.4Hz, 1H) IR (KBr): 3304, 1603, 1564, 1512, 1491, 1455, 1355, 1329, 1279, 1149, 1131, 1043, 1019, 986, 879, 823, 583cm^{-1}

Table 125

Ib-354	mp 117-118 °C; ^{1}H NMR (300 MHz, $CDCl_3$) δ 1.12-1.30 (m, 2H), 1.30-1.48 (m, 2H). 1.62-1.75 (m, 2H), 1.80 (s, 3H), 1.83 (s, 3H), 1.75-1.84 (m, 2H), 2.06 (s, 3H), 2.07 (s, 3H), 2.06-2.18 (m, 2H), 3.33 (s, 3H), 3.34 (s, 3H), 3.30-3.37 (m, 1H), 4.88 (d, J = 6.9 Hz, 2H), 5.56-5.61 (m, 1H), 6.65-6.72 (m, 2H), 6.84 (dd, J = 8.7, 0.9 Hz, 1H), 7.06-7.13 (m, 2H), 7.56 (dd, J = 8.7, 2.4 Hz, 1H), 8.11 (dd, J = 2.4, 0.9 Hz, 1H) .
Ib-355	mp 108-110 °C, ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.81 (s, 3H), 1.82 (s, 3H), 1.94 (s, 3H), 2.06 (s, 3H), 2.26 (s, 3H), 3.32 (s, 3H), 3.33 (s, 3H), 3.75(d, J = 6.9 Hz, 2H), 4.87 (d, J = 7.2 Hz, 2H), 5.40 (m, 1H), 5.57 (m, 1H), 6.65 (d, J = 8.4 Hz, 2H), 6.72 (d, J = 8.4 Hz, 2H), 7.14 (d, J = 8.4 Hz, 2H), 7.37 (d, J = 8.4 Hz, 1H). IR (KBr): 3417, 2930, 1613, 1595, 1520, 1449, 1391, 1297, 1281, 1246, 1133, 1101, 1038 cm^{-1}
Ib-356	mp 119-121 °C, ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H),1.79 (s, 3H), 1.82 (s, 3H), 2.06 (s, 3H). 2.07 (s, 3H), 2.25 (s, 3H), 3.33 (s, 3H), 3.35 (s, 3H), 3.75(d, J = 6.6 Hz, 2H), 4.91 (d, J = 6.6 Hz, 2H), 5.39 (br t, J = 6.6 Hz, 1H), 5.59 (br t, J = 6.6 Hz, 1H), 6.71 (d, J = 8.4 Hz, 2H), 7.13 (d, J = 8.4 Hz, 2H), 7.37 (d, J = 2.1 Hz, 1H), 7.94 (d, J = 2.1 Hz, 1H)
Ib-357	mp 130-132 °C, ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 1.94 (s, 3H), 2.06 (s, 6H), 3.33 (s, 3H), 3.37 (s, 3H), 3.76 (d, J = 6.9 Hz, 2H), 4.86 (d, J = 6.9 Hz, 2H), 5.40 (m, 1H), 5.57 (m, 1H), 6.71-6.74 (m, 3H), 7.14 (d, J = 8.7 Hz, 2H), 7.94 (s, 1H). IR (KBr): 3392, 2927, 1611, 1521, 1448, 1390. 1349, 1322, 1286, 1270, 1236, 1179. 1115, 1026 cm^{-1}
Ib-358	mp 120-121 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 2.06 (s, 3H), 2.07 (s, 3H), 2.63 (s, 3H), 3.33 (s, 6H), 3.75 (d, J = 9.6Hz, 2H), 5.39 (m, 1H), 6.70 (d, J = 8.4Hz, 2H), 7.12 (d, J = 8.4Hz, 2H), 7.27 (d, J = 8.1Hz, 1H), 7.51 (dd, J = 8.1, 2.4Hz, 1H), 8.42 (d, J = 2.4Hz, 1H) IR (KBr): 3379, 1614, 1587, 1523, 1459, 1395, 1351, 1319, 1286, 1136, 1109, 1038, 1016, 985, 818cm^{-1}
Ib-359	mp 163-164 °C; ^{1}H NMR (300 MHz, $CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 2.07 (s, 3H),2.09 (s, 3H), 3.33 (s, 3H), 3.36 (s, 3H), 3.75 (d, J = 6.6 Hz, 2H), 3.91 (t, J = 5.9 Hz, 2H), 4.58 (br s, 1H), 5.35-5.42 (m, 2H), 6.49 (d, J = 8.3 Hz, 1H), 6.65-6.72 (m, 2H), 7.08-7.15 (m, 2H), 7.44 (dd, J = 8.3, 2.0 Hz, 1H), 8.06 (d, J = 2.0 Hz, 1H) .
Ib-360	mp 145-146 °C; ^{1}H NMR (300 MHz, $CDCl_3$) δ 1.79 (s, 3H), 2.06 (s, 3H), 2.08 (s, 3H), 3.35 (s, 3H), 3.78 (t, J = 5.6 Hz, 2H), 3.88 (br s, 1H), 4.53 (br s), 5.36-5.44 (m, 1H), 6.61 (dd, J = 8.4, 0.75 Hz, 1H), 6.73-6.79 (m, 1H), 6.92-6.98 (m, 2H), 7.45 (dd, J = 8.4, 2.1 Hz, 1H), 8.04 (d, J = 2.1 Hz, 1H) .
Ib-361	mp 143-144 °C; ^{1}H NMR (300 MHz, $CDCl_3$) δ 1.75 (s, 3H), 1.79 (s, 3H), 2.06 (s, 3H), 2.09 (s, 3H), 3.35 (s, 3H), 3.36 (s, 3H), 3.78 (t, J = 6.0 Hz, 2H), 3.83-3.94 (m, 3H), 4.53 (br s, 1H), 5.34-5.44 (m, 2H), 6.48 (dd, J = 8.4, 0.9 Hz, 1H), 6.73-6.79 (m, 1H), 6.92-6.98 (m, 2H), 7.43 (dd, J = 8.4, 2.4 Hz, 1H), 8.05 (dd, J = 2.4, 0.6 Hz, 1H) .
Ib-362	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.20-1.35 (m, 3H), 1.35-1.48 (m, 2H), 1.77 (s, 3H), 1.82 (s, 3H), 1.60-1.96 (m, 3H), 2.04 (s, 3H), 2.09 (s, 3H), 2.04-2.15 (m, 2H). 3.34 (s, 3H), 3.36 (s, 3H), 3.53-3.64 (m, 1H), 4.64 (d, J = 6.9 Hz, 2H), 4.60-4.65 (m, 1H), 5.54-5.60 (m, 1H), 6.47 (d, J = 8.4 Hz, 1H), 6.96-7.09 (m, 3H), 7.41 (dd, J = 8.4, 2.2 Hz, 1H), 8.02 (d, J = 2.2 Hz, 1H) .

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Ib-363	mp 96-97 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.79 (s, 6H), 1.82 (s, 3H), 2.05 (s, 6H), 2.18 (s, 3H), 3.74 (d, J = 6.6Hz, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.39 (t, J = 6.9Hz, 1H), 5.58 (t, J = 7.2Hz, 1H), 6.70 (d, J = 8.4Hz, 2H), 6.81 (d, J = 8.4Hz, 1H), 6.96-6.99 (m, 3H), 7.57 (dd, J = 0.9, 8.7Hz, 1H), 8.16 (d, J = 2.1Hz, 1H) ; IR (KBr): 3345, 2972, 2913, 1613, 1560, 1522, 1490, 1466, 1281, 1240, 982, 827 cm^{-1}
Ib-364	mp 133-134 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82 (s, 3H), 2.05 (s, 6H), 2.18 (s, 3H), 4.17 (br s, 1H), 4.38 (s, 2H), 4.87 (d, J = 7.2Hz, 2H), 5.58 (t, J = 7.2Hz, 1H), 6.74 (d, J = 8.4Hz, 2H), 6.81 (dd, J = 0.6, 8.4Hz, 1H), 6.97-6.99 (m, 3H), 7.31-7.46 (m, 5H), 7.57 (dd, J = 2.7, 8.7Hz, 1H), 8.15 (dd, J = 0.6, 2.4Hz, 1H) ; IR (KBr): 3357, 2962, 2922, 1614, 1526, 1491, 1465, 1359, 1280, 1241, 999, 828 cm^{-1}
Ib-365	mp 89-91 °C; ^{1}H NMR ($CDCl_3$) δ 1.71 (s, 3H), 1.75 (s, 3H), 1.79(s, 3H), 1.82 (s, 3H), 2.25 (s, 3H), 3.75 (d, J=6.9Hz, 2H), 3.88 (s, 3H), 4.87 (d, J=6.9Hz, 2H), 5.37 (m, 1H), 5.58 (m, 1H), 6.74-6.84 (m , 4H), 7.21(s, 1H), 7.41-7.45(m, 2H), 7.76(dd, J=2.4, 8.4Hz, 1H), 8.19 (d, J=2.4Hz, 1H); IR ($CHCl_3$): 3426, 2935, 2859, 1611, 1524, 1504, 1482, 1379, 1357, 1316, 1281, 1241, 1187, 1165, 1128, 1039, 979, 895cm^{-1}
Ib-366	mp 93-94 °C; ^{1}H NMR ($CDCl_3$) δ 1.25 (d, J=6.3Hz, 6H), 1.79 (s, 3H), 1.82(s, 3H), 2.24 (s, 3H), 3.67 (m, 1H), 3.79 (s, 3H), 4.87 (d, J=7.2Hz, 2H), 5.57 (m, 1H), 6.69 (d, J=7.5Hz, 2H), 6.79 (s, 1H), 6.82 (d , J=8.4Hz, 1H), 7.21(s, 1H), 7.42(d, J=8.4Hz, 2H), 7.60(dd, J=2.4, 8.7Hz, 1H), 8.19 (d, J=2.4Hz, 1H); IR ($CHCl_3$): 3424, 2974, 2934, 2871, 1673, 1611, 1566, 1524, 1504, 1482, 1385, 1357, 1318, 1281, 1242, 1129, 1039, 979cm^{-1}
Ib-367	mp 105-108 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.82(s, 3H), 2.24 (s, 3H), 3.78 (s, 3H), 4.38 (s, 2H), 4.87 (d, J=7.2Hz, 2H), 5.57 (m, 1H), 6.73 (d, J=8.4Hz, 2H), 6.79 (s, 1H), 6.82 (d , J=8.4Hz, 1H), 7.20(s, 1H), 7.28-7.43(m, 7H), 7.60(dd, J=2.4, 8.4Hz, 1H), 8.18 (d, J=2.4Hz, 1H); IR ($CHCl_3$): 3448, 3421, 2936, 2859, 1612, 1566, 1524, 1482, 1391, 1358, 1316, 1281, 1242, 1187, 1165, 1128, 1039, 979cm^{-1}
Ib-368	mp 112-113 °C; ^{1}H NMR ($CDCl_3$) δ 1.55-1.72 (m, 6H), 1.79(s, 3H), 1.82 (s, 3H), 2.07-2.12 (m, 2H), 2.24(s, 3H), 3.41 (m, 1H), 3.79 (s, 3H), 3.96 (s, 4H), 4.87 (d, J=6.6Hz, 2H), 5.57 (m, 1H), 6.70-6.83 (m, 4H), 7.20 (s, 1H),7.42 (d , J=8.4Hz, 2H), 7.42(d, J=8.4Hz, 2H), 7.60(dd, J=1.8, 8.4Hz, 1H), 8.18(d, J=1.8Hz, 1H); IR ($CHCl_3$): 3425, 2952, 2887, 1611, 1524, 1504, 1482, 1445, 1376, 1357, 1310, 1281, 1188, 1152, 1105, 1036, 977, 925 cm^{-1}
Ib-369	mp 141-142 °C; ^{1}H NMR ($CDCl_3$) δ 1.56 (m, 2H), 1.79(s, 3H), 1.82 (s, 3H), 2.05-2.10 (m, 2H), 2.25(s, 3H), 3.48-3.59 (m, 3H), 3.79 (s, 3H), 4.00-4.05 (m, 2H), 4.87 (d, J=6.9 Hz, 2H), 5.57 (m, 1H), 6.73-6.84 (m, 4H), 7.20 (s, 1H),7.42 (d , J=8.4Hz, 2H), 7.60(dd, J=2.4, 8.4Hz, 1H), 8.18(d, J=2.4Hz, 1H); IR ($CHCl_3$): 3424, 2966, 2939, 2850, 1611, 1566, 1523, 1482, 1386, 1357, 1316, 1188, 1136, 1087, 1039, 982, 870 cm^{-1}
Ib-370	mp 83-86 °C; ^{1}H NMR ($CDCl_3$) δ 1.71 (s, 3H), 1.75(s, 3H), 2.24 (s, 3H), 3.74-3.81 (m, 5H), 5.35-5.40 (m, 3H), 6.40 (m, 1H), 6.48 (m, 1H), 6.74 (d, J=8.7Hz, 2H), 6.80 (s, 1H), 6.85 (d, J=8.7Hz, 1H), 7.21 (s, 1H), 7.42-7.48 (m, 3H), 7.62(dd, J=2.4, 8.4Hz, 1H), 8.20(d, J=2.4Hz, 1H); IR ($CHCl_3$): 3427, 2935, 2858, 1611, 1567, 1524, 1503, 1480, 1390, 1346, 1316, 1282, 1187, 1165, 1150, 1127, 1039, 1015, 992, 920 cm^{-1}

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Ib-371	mp 100-101 °C; ^{1}H NMR ($CDCl_3$) δ 1.26 (d, J=6.3Hz, 6H), 2.24(s, 3H), 3.67 (m, 1H), 3.79 (s, 3H), 5.39(s, 2H), 6.40 (m, 1H), 6.49 (m, 1H), 6.70-6.73 (m, 2H), 6.79 (s, 1H), 6.84 (d, J=8.4Hz, 1H), 7.21 (s, 1H), 7.43 (d , J=8.4Hz, 2H), 7.48(m, 1H). 7.62(dd, J=2.4, 8.4Hz, 1H), 8.20(d, J=2.4Hz, 1H); IR ($CHCl_3$): 3424, 2967, 2934. 1611, 1567, 1524, 1479, 1384, 1346, 1318, 1282, 1243. 1187, 1151, 1127, 1039, 1015, 992. 920 cm^{-1}
Ib-372	mp 138-139 °C; ^{1}H NMR ($CDCl_3$) δ 1.56-1.84 (m, 6H), 2.09-2.12(m, 2H), 2.24 (s, 3H), 3.42 (m, 1H), 3.79(s, 3H), 3.97 (s, 4H), 5.39 (s, 2H), 6.40 (m, 1H), 6.49 (d, J=3.3Hz, 1H), 6.72 (m, 2H), 6.79 (s, 1H), 6.85 (d, J=8.7Hz, 1H). 7.20 (s, 1H), 7.42 (d, J=8.7Hz, 2H), 7.47 (d, J=1.8Hz, 1H), 7.62 (dd, J=2.7, 8.7Hz, 1H), 8.20 (d, J=2.7Hz, 1H); IR ($CHCl_3$): 3425, 2952, 2886, 1611, 1568, 1524, 1504, 1480, 1446, 1375, 1346. 1311, 1282, 1188, 1151, 1105, 1037. 993, 924 cm^{-1}
Ib-373	mp 128-130 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.82 (s, 3H), 2.04 (s, 3H), 2.08 (s, 3H), 3.34 (s, 3H), 3.54 (s, 3H), 3.75 (d, J = 6.3Hz, 2H), 4.86 (d, J = 6.9Hz, 2H), 5.39 (m, 1H), 5.56 (m, 1H). 6.72 (d, J = 8.4Hz, 2H), 6.79 (dd, J = 8.7, 0.6Hz, 1H), 7.11 (d, J = 8.4Hz, 2H), 7.48 (dd, J = 8.7, 2.4Hz, 1H), 8.04 (dd, J = 2.4, 0.6Hz, 1H) ; IR (KBr) 3420, 1730, 1612, 1603. 1561. 1521. 1490. 1461. 1277, 1223. 1120. 1002. 983. 823 cm^{-1}
Ib-374	mp 172-173 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 2.04 (s, 3H), 2.08 (s, 3H), 3.35 (s, 3H), 3.53 (s, 3H), 3.75 (d, J = 6.9Hz, 2H), 5.38 (s, 2H), 5.39 (m, 1H), 6.39 (dd, J = 3.3, 1.8Hz, 1H), 6.48 (d, J = 3.3Hz, 1H), 6.73 (d, J = 8.4Hz, 2H), 6.82 (dd, J = 8.4, 0.9Hz, 1H), 7.11 (d, J = 8.4Hz, 2H), 7.47 (dd, J = 1.8, 0.9Hz, 1H) 7.50 (dd, J = 8.4, 2.4Hz, 1H), 8.06 (dd, J = 2.4, 0.9Hz, 1H) ; IR (KBr) 3415, 1730, 1610, 1562, 1520, 1490, 1452, 1346, 1278, 1224, 1121, 989. 825. 736 cm^{-1}
Ib-375	mp 146-147 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.83 (s, 3H), 1.99 (s, 6H), 2.02 (s, 3H), 2.12 (s, 3H), 3.75 (d, J = 6.9Hz, 2H), 3.80 (br s, 1H), 4.89 (d, J = 6.9Hz, 2H), 5.39 (t, J = 6.9Hz, 1H), 5.59 (t, J = 7.2Hz, 1H), 6.70 (d, J = 8.7Hz, 2H), 6.85 (d, J = 8.4Hz, 1H), 6.91-6.99 (m, 2H), 7.45 (dd, J = 2.4. 8.4Hz, 1H), 8.01 (dd, J = 0.9, 2.1Hz, 1H) ; IR (KBr): 3395, 2970, 2911, 2855, 1613, 1603, 1519, 1376, 1277, 1185, 1126, 977, 804 cm^{-1}
Ib-376	mp 187-188 °C; ^{1}H NMR ($CDCl_3$) δ 1.79 (s, 3H), 1.83 (s, 3H), 1.99 (s, 3H), 2.02 (s, 3H), 2.12 (s, 3H), 4.13 (br s, 1H), 4.38 (s, 2H), 4.89 (d, J = 6.9Hz, 2H), 5.59 (t, J = 7.2Hz. 1H), 6.74 (d, J = 8.4Hz, 2H), 6.85 (d, J = 8.4Hz, 1H), 6.93-6.96 (m, 2H), 7.31-7.46 (m, 6H), 8.01 (d, J = 1.8Hz, 1H) ; IR (KBr): 3358, 2964, 2929, 1613, 1526, 1490, 1451, 1280, 1244, 1184, 1125, 997, 975, 804. 732 cm^{-1}
Ib-377	mp 75-76 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 1.80 (s. 3H), 1.83 (s, 3H), 2.01 (s, 3H), 2.07 (s, 3H), 2.11 (s, 3H). 3.37 (s, 3H), 3.73 (d, J = 6.6Hz, 2H), 4.09 (br s, 1H). 4.88 (d, J = 6.9Hz, 2H), 5.38 (t, J = 6.6Hz, 1H), 5.59 (t, J = 7.2Hz, 1H). 6.52-6.56 (m, 2H), 6.84 (d, J = 7.5Hz, 1H), 6.85 (s, 1H). 6.96 (d, J = 7.8Hz. 1H), 7.59 (dd, J=2.4. 8.4Hz, 1H), 8.14 (d, J = 1.8Hz, 1H) ; IR (KBr): 3424, 3339, 2969, 2927, 1611, 1509, 1460, 1353, 1282, 1252. 1103. 984. 813 cm^{-1}

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Ib-378	mp 150-151 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.01 (s, 3H), 2.06 (s. 3H), 2.11 (s, 3H), 3.37 (s, 3H), 4.36 (s, 2H), 4.88 (d, J = 6.9Hz, 2H), 5.59 (t, J = 7.2Hz, 1H), 6.54-6.60 (m, 2H), 6.84 (d, J = 8.4Hz, 1H). 6.84 (s, 1H), 6.96 (d, J = 8.1Hz, 1H), 7.30-7.44 (m, 5H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.14 (dd, J = 0.9, 2.4Hz, 1H) ; IR (KBr): 3412, 3272, 3018, 2927, 2858, 1611, 1517. 1459. 1375, 1355, 1317, 1283, 1243. 1106. 1050, 985 cm^{-1}
Ib-379	mp 69-70 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 2.13 (s, 3H), 2.15 (s, 3H), 3.38 (s, 3H), 3.72 (d, J = 6.9Hz, 2H), 4.88 (d, J = 6.9Hz, 2H), 5.36 (t, J = 6.9Hz, 1H), 5.58 (t, J = 7.2Hz, 1H), 6.38-6.49 (m, 2H), 6.84 (d, J = 8.4Hz, 1H), 6.95 (s, 1H), 7.06 (dd, J = 8.1, 8.4Hz, 1H), 7.57 (dd, J=2.4, 8.4Hz, 1H), 8.13 (d, J = 1.8Hz, 1H) ; IR (KBr): 3416, 2972, 2930, 1627, 1522, 1462, 1376, 1269. 1240, 1171, 1098. 963. 832 cm^{-1}
Ib-380	mp 156-157 °C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.13 (s, 3H), 2.14 (s, 3H), 3.38 (s, 3H). 4.36 (s, 2H), 4.89 (d, J = 7.2Hz, 2H), 5.58 (t, J = 7.2Hz, 1H), 6.40-6.51 (m, 2H), 6.84 (d, J = 8.4Hz, 1H), 6.94 (s, 1H), 7.09 (dd, J = 8.1, 8.4Hz, 1H), 7.32-7.40 (m. 5H), 7.58 (dd, J = 2.4, 8.4Hz, 1H), 8.13 (dd, J = 0.6, 1.8Hz, 1H) ; IR (KBr): 3262, 3019, 2930, 1626, 1528, 1464, 1353, 1317. 1284. 1244. 1170, 1105, 986. 821 cm^{-1}
Ib-381	mp 121-123 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.80 (s, 6H), 1.83 (s, 3H), 1.97 (s, 3H), 2.00 (s, 3H), 2.07 (s, 3H), 3.51 (s, 3H), 3.72 (d, J = 6.9Hz, 2H), 4.88 (d. J = 6.9Hz, 2H), 5.37 (m, 1H), 5.58 (m, 1H), 6.64 (d, J = 8.7Hz, 2H), 6.85 (d, J = 8.4Hz, 1H), 7.01-7.08 (m, 2H), 7.38 (dd, J = 8.4, 2.4Hz, 1H), 7.96 (d, J = 2.4Hz, 1H) ; IR (KBr) 3391, 1713, 1613, 1602, 1524, 1487, 1437, 1298. 1276, 1243, 1222, 1122, 979 cm^{-1}
Ib-382	mp 126-128 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.97 (s, 3H), 2.00 (s, 3H), 2.07 (s, 3H), 3.51 (s, 3H), 3.72 (d. J = 6.6Hz, 2H), 5.37 (m, 1H), 5.39 (s, 2H), 6.41 (dd, J = 3.0, 1.8Hz, 1H), 6.50 (brd, J = 3.0Hz, 1H), 6.64 (d, J = 8.7Hz, 2H), 6.89 (dd, J = 8.4, 0.6Hz, 1H), 7.01-7.09 (m, 2H), 7.40 (dd, J = 8.4, 2.4Hz, 1H), 7.48 (dd, J = 1.8, 0.6Hz. 1H), 7.98 (dd, J = 2.4, 0.6Hz, 1H) ; IR (KBr) 3384, 1714, 1612, 1523, 1490, 1343, 1322, 1301, 1281, 1246, 1224, 1124, 990 cm^{-1}
Ib-383	mp 161-163 °C; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.77 (s, 3H), 1.91 (t, J = 2.4Hz, 3H), 1.96 (s, 3H), 1.99 (s, 3H), 2.07 (s, 3H), 3.51 (s, 3H), 3.72 (d, J = 6.6Hz, 2H). 5.01 (q, J = 2.4Hz, 2H), 5.37 (m, 1H), 6.65 (d, J = 9.0Hz, 2H), 6.90 (dd, J = 8.7, 0.9Hz, 1H), 7.01-7.08 (m, 2H), 7.40 (dd, J = 8.7, 2.4Hz, 1H), 7.97 (dd, J = 2.4, 0.9Hz, 1H) ; IR (KBr) 3385, 1725, 1613, 1603, 1525, 1488, 1344, 1329. 1303. 1281, 1246. 1221. 999 cm^{-1}
Ib-384	Oil ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.30 (s, 3H), 2.44 (s, 3H), 4.64 (d, J = 6.6Hz. 2H), 5.55 (m, 1H), 6.99-7.12 (m, 3H), 7.17 (s, 1H), 7.37 (s, 1H). 7.53 (d. J = 1.2Hz, 1H). 9.07 (d, J = 1.2Hz, 1H)
Ib-385	mp 93-94 °C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s. 3H), 2.28 (s, 3H), 2.40 (s. 3H), 4.05 (s, 3H). 4.64 (d, J = 6.9Hz, 2H). 5.55 (m, 1H), 6.86 (d, J = 1.2Hz, 1H). 6.98-7.12 (m,3H), 7.26 (s, 1H). 7.34 (s, 1H), 8.87 (d, J = 1.2Hz, 1H) ; IR (KBr) 1589, 1533. 1518, 1496, 1394, 1364, 1299. 1263, 1232, 1123, 1040, 997. 986. 872 cm^{-1}

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Ib-386	mp 95-96 °C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.28 (s, 3H), 2.38 (s, 3H), 3.17 (s, 6H), 4.64 (d, J = 6.9Hz, 2H), 5.55 (m, 1H), 6.53 (d, J = 1.2Hz, 1H), 6.98-7.14 (m,4H), 7.29 (s, 1H), 8.69 (d, J = 1.2Hz, 1H) ; IR (KBr) 1591, 1512, 1417, 1405. 1299, 1278, 1261, 1228, 1123, 1000, 836, 827 cm^{-1}
Ib-387	mp 88-90°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.83 (s, 3H), 2.29 (s, 3H), 2.30 (s, 3H), 4.57 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.99 (d, J = 8.4Hz, 2H), 7.12 (s, 1H), 7.20 (s, 1H), 7.28 (d, J = 8.4Hz, 2H), 8.79 (s, 2H), 9.22 (s, 1H) : IR (KBr) 1611, 1519, 1497, 1415, 1384, 1240, 1007, 820, 731 cm^{-1}.
Ib-388	mp 97-98°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.30 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 7.00-7.14 (m, 4H), 7.18 (s, 1H), 8.78 (s, 2H), 9.22 (s 1H) ; IR (KBr) 1523, 1502, 1415, 1386, 1313. 1285, 1274. 1263. 1233, 1200, 1131. 995, 858 cm^{-1}.
Ib-389	mp 163-166°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 4.56 (d, J = 6.6Hz, 2H), 5.11 (tm, J = 6.6Hz, 1H), 6.98 (d, J = 8.7Hz, 2H), 7.08 (s, 1H), 7.16 (s, 1H), 7.27 (d, J = 8.7Hz, 2H), 8.35 (s, 2H) ; IR (KBr) 3393. 3315, 3196, 1639, 1605, 1595. 1518, 1480. 1236. 1002. 838, 802 cm^{-1}.
Ib-390	mp 158-160°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.28 (s, 3H), 2.29 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.17 (s, 2H), 5.56 (t, J = 6.6Hz, 1H), 6.98-7.16 (m, 5H), 8.35 (s, 2H) ; IR (KBr) 3334, 3187, 1655, 1598, 1522, 1486, 1296, 1269, 1230, 1125, 998 cm^{-1}.
Ib-391	mp 156-158°C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.77 (s, 6H), 1.82 (s, 3H), 2.28 (s, 3H), 2.30 (s, 3H). 4.05 (t, J = 6.0Hz, 2H), 4.56 (d, J = 6.6Hz, 2H), 5.11 (t, J = 5.4Hz, 1H), 5.36 (tm, J = 6.6Hz, 1H), 5.54 (t, J = 6.6Hz, 1H), 6.97 (d. J = 9.0Hz, 2H), 7.08 (s, 1H), 7.15 (s, 1H), 7.27 (d, J = 9.0Hz, 2H), 8.34 (s, 2H) ; IR (KBr) 3236, 1608, 1598, 1522, 1495, 1436, 1264, 1244, 1181, 998, 833. 803 cm^{-1}.
Ib-392	mp 105-106°C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.77 (s, 6H), 1.82 (s, 3H), 2.28 (s, 3H), 2.30 (s, 3H), 4.00-4.09 (m, 2H), 4.63 (d, J = 6.6Hz, 2H), 5.14 (m, 1H), 5.37 (m, 1H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.17 (m 5H), 8.34 (s, 2H) ; IR (KBr) 3254. 1607. 1524. 1495, 1440. 1300. 1271, 1235. 1129. 995 cm^{-1}.
Ib-393	mp 182-184 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s. 3H), 2.29 (s, 6H), 4.05 (dd, J = 6.6, 5.7Hz, 2H), 5.17 (brs, 1H), 5.37 (tm, J = 6.6Hz. 1H), 6.75 (d, J = 8.7Hz, 2H), 7.07 (s, 1H), 7.14 (s, 1H), 7.15 (d, J = 8.7Hz, 2H), 8.34 (s, 2H) ; IR (KBr) 3443, 3327, 3245, 3110, 1631, 1602, 1525, 1493, 1440, 1301, 828. 802 cm^{-1}
Ib-394	mp 160-162 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 6H), 1.77 (s. 6H), 2.29 (s, 3H), 2.30 (s, 3H), 3.74 (d, J = 6.9Hz, 2H), 4.05 (dd, J = 6.6, 6.0Hz, 2H), 5.15 (brs. 1H), 5.37 (m, 2H), 6.67 (d. J = 8.4Hz. 2H), 7.07 (s, 1H), 7.16 (s, 1H). 7.18 (d, J = 8.4Hz, 2H), 8.34 (s, 2H) ; IR (KBr) 3423, 3240, 3104. 1612, 1598, 1525, 1496. 1436. 1321, 1262. 1187. 1087. 824. 802 cm^{-1}
Ib-395	mp 106-108 °C; ^{1}H NMR ($CDCl_3$) δ 1.72 (s, 6H), 1.74 (s, 9H), 1.77 (s, 3H), 2.29 (s, 3H), 2.32 (s, 3H), 3.91 (d, J = 5.7Hz, 4H), 4.04 (dd. J = 6.3, 5.7Hz, 2H), 5.08 (m, 1H), 5.27 (m, 2H), 5.37 (m, 1H), 6.72 (brd, J = 8.7Hz, 2H), 7.07 (s, 1H), 7.17 (s, 1H), 7.21 (d, J = 8.7Hz, 2H), 8.34 (s, 2H) ; IR (KBr) 3433, 3254, 3110, 1599, 1523, 1494, 1434, 1378, 1232, 1196, 1092, 817, 801 cm^{-1}

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Ib-396	mp 84-86 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.79 (s, 3H), 2.23 (s, 3H), 2.28 (s, 3H), 3.71 (d, J = 6.9Hz, 2H), 4.93 (d, J = 6.9Hz, 2H), 5.32-5.61 (m, 2H), 6.36-6.48 (m, 2H), 7.05 (t, J = 8.4Hz, 1H). 7.09(s, 1H), 7.15(s, 1H), 8.53 (s, 2H) IR (KBr): 3224, 3315, 2970, 2923, 1628, 1592, 1534, 1474, 1438, 1377, 1341, 1317, 1249, 1173, 1110, 993 cm^{-1}
Ib-397	mp 150-152 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.81 (s, 3H), 1.99 (s, 6H), 2.00 (s, 6H), 3.74 (d, J = 6.9Hz, 2H), 4.95 (d, J = 7.2Hz, 2H), 5.37-5.42 (m, 1H), 5.58-5.64 (m, 1H), 6.68-6.71 (m, 2H), 6.93-6.97 (m, 2H), 8.36 (s, 2H) IR (KBr): 3360, 2973, 2928, 2857, 1610, 1587, 1519, 1436, 1406, 1379, 1310, 1245, 1181, 983 cm^{-1}
Ib-398	mp 156-158 °C; ^{1}H NMR ($CDCl_3$) δ 1.60 (s, 3H), 1.75 (s, 3H), 1.77 (s, 3H), 1.82 (s, 3H), 1.97 (s, 6H), 2.03 (s, 6H), 4.04-4.08 (m, 2H), 4.64 (d, J = 6.6Hz, 2H), 5.05-5.08 (m, 1H), 5.30-5.41 (m, 1H), 5.54-5.60 (m, 1H), 6.81-6.84 (m, 1H), 6.89 (dd, J = 1.8, 12.0Hz, 1H), 7.05 (t, J = 8.7Hz, 1H), 8.15 (s, 1H), IR (KBr): 3320, 2971, 2931, 2850, 1627, 1604, 1525, 1483, 1395, 1373, 1338, 1309, 1288, 1263, 1240, 1175, 1115, 1038 cm^{-1}.
Ib-399	mp 161-163 °C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 1.97 (s, 6H), 2.02 (s, 6H), 4.64 (d, J = 6.6Hz, 2H), 5.13 (br s, 2H), 5.54-5.60 (m, 1H), 6.80-6.84 (m, 1H), 6.88 (dd, J = 1.8, 11.7Hz, 1H), 7.05 (t, J = 8.7Hz, 1H), 8.16 (s, 1H) IR (KBr): 3344, 3210, 2987, 2917, 2859, 1654, 1618, 1597, 1541, 1513, 1479, 1427, 1382, 1295, 1263, 1240, 1212, 1114, 993 cm^{-1}.
Ib-400	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.75 (s, 3H), 1.77 (s, 6H), 1.82 (s, 3H), 2.05 (s, 3H), 2.12 (s, 3H), 3.34 (s, 3H), 3.39 (s, 3H), 4.06 (t, J = 6.0 Hz, 2H), 4.65 (d, J = 6.9 Hz, 2H), 5.18 (t, J = 5.3 Hz, 1H), 5.35-5.42 (m, 1H), 5.53-5.60 (m, 1H), 7.08-6.95 (m, 3H), 8.30 (s, 2H) .
Ib-401	Oil ; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.31 (s, 3H), 2.54 (s, 3H), 4.56 (d, J = 6.6Hz, 2H), 5.54 (t, J = 6.6Hz, 1H), 6.98 (d, J = 8.4Hz, 2H), 7.16 (s, 1H), 7.21 (t, J = 5.1Hz, 1H), 7.28 (d, J = 8.4Hz, 2H), 7.73 (s, 1H), 8.85 (d, J = 5.1Hz, 2H) .
Ib-402	mp 93-94°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.31 (s, 3H), 2.54 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.25 (m, 5H), 7.73 (s, 1H), 8.85 (s, 1H), 8.86 (s 1H) ; IR (KBr) 1573, 1560, 1521, 1414, 1299, 1277, 1260, 1238, 1130, 997 cm^{-1}.
Ib-403	mp 107-108 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.77 (s, 3H), 1.81 (s, 3H), 1.83 (s, 3H), 2.32 (s, 3H), 2.39 (s, 3H), 3.67 (br s, 1H), 3.74 (d, J = 6.8 Hz, 2H), 5.10 (d, J = 7.1 Hz, 2H), 5.37 (br t, J = 6.8 Hz, 1H), 5.62 (br t, J = 7.1 Hz, 1H),6.67 (d, J = 8.5 Hz, 2H), 7.02 (d, J = 9.0 Hz, 1H), 7.17 (s, 1H), 7.20 (d, J = 8.5 Hz, 2H), 7.33 (s, 1H), 7.52 (d, J = 9.0 Hz, 1H)
Ib-404	mp 149-151°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 6H), 1.82 (s, 3H), 2.31 (s, 3H), 2.38 (s, 3H), 4.57 (d, J = 6.6Hz, 2H), 5.54 (t, J = 6.6Hz, 1H), 6.99 (d, J = 9.0Hz, 2H), 7.20 (s, 1H), 7.27 (d, J = 9.0Hz, 2H), 7.34 (s, 1H), 7.58 (d, J = 9.0Hz, 1H), 7.60 (d, J = 9.0Hz, 1H) ; IR (KBr) 1610, 1572, 1517, 1496, 1421, 1411, 1249, 1179, 1142, 1012, 1004, 857, 841 cm^{-1}.

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Ib-405	mp 94-94.5°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.30 (s, 3H), 2.39 (s, 3H), 4.20 (s, 3H), 4.57 (d, J = 6.6Hz, 2H), 5.54 (tm, J = 6.6Hz, 1H), 6.98 (d, J = 8.7Hz, 2H), 7.04 (d, J = 9.0Hz, 1H), 7.18 (s, 1H), 7.28 (d, J = 8.7Hz, 2H), 7.34 (s, 1H), 7.53 (d, J = 9.0Hz, 1H) ; IR (KBr) 1610, 1592, 1518, 1464, 1415, 1295, 1235, 1175, 1107, 1016, 867, 830 cm^{-1}.
Ib-406	mp 165-167°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.41 (s, 3H), 3.24 (s, 6H), 4.56 (d, J = 6.6Hz, 2H), 5.54 (tm, J = 6.6Hz, 1H), 6.87 (d, J = 9.3Hz, 1H), 6.97 (d, J = 9.0Hz, 2H), 7.15 (s, 1H), 7.28 (d, J = 9.0Hz, 2H), 7.36 (s, 1H), 7.38 (d, J = 9.3Hz, 1H) ; IR (KBr) 1606, 1593, 1493, 1427, 1387, 1237, 1178, 1003, 847, 826 cm^{-1}.
Ib-407	mp 138-140°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.30 (s, 3H), 2.38 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 7.00-7.13 (m, 3H), 7.19 (s, 1H), 7.34 (s, 1H), 7.56 (m, 1H) 7.62 (m, 1H) ; IR (KBr) 1518, 1496, 1414, 1385, 1299, 1266, 1233, 1127, 994, 851 cm^{-1}.
Ib-408	mp 91-92°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.39 (s, 3H), 4.20 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.90-7.14 (m, 4H), 7.16 (s, 1H), 7.34 (s, 1H), 7.53 (d, J = 9.0Hz, 1H) ; IR (KBr) 1593, 1519, 1496, 1469, 1417, 1294, 1274, 1263, 1231, 1126, 1010, 995, 845 cm^{-1}.
Ib-409	mp 132-134°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.41 (s, 3H), 3.24 (s, 6H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.87 (d, J = 9.6Hz, 1H), 6.97-7.15 (m, 4H), 7.36 (s, 1H), 7.37 (d, J = 9.6Hz, 1H) ; IR (KBr) 1597, 1547, 1519, 1495, 1422, 1404, 1297, 1272, 1233, 1197, 1133, 993, 849 cm^{-1}.
Ib-410	mp 197-200°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.36 (s, 3H), 4.56 (d, J = 6.9Hz, 2H), 4.82 (s, 2H), 5.54 (tm, J = 6.9Hz, 1H), 6.83 (d, J = 9.0Hz, 1H), 6.97 (d, J = 9.0Hz, 2H), 7.16 (s, 1H), 7.27 (d, J = 9.0Hz, 2H), 7.31 (s, 1H), 7.39 (d, J = 9.0Hz, 1H) ; IR (KBr) 3486, 3370, 3308, 3164, 1649, 1625, 1606, 1516, 1495, 1461, 1234, 1216, 1173, 1011, 999, 982, 846, 835 cm^{-1}.
Ib-411	mp 183-185°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.28 (s, 3H), 2.36 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 4.89 (brs, 2H), 5.55 (tm, J = 6.6Hz, 1H), 6.85 (d, J = 9.0Hz, 1H), 6.98-7.12 (m, 3H), 7.14 (s, 1H), 7.32 (s, 1H), 7.38 (d, J = 9.0Hz, 1H) ; IR (KBr) 3486, 3368, 3308, 3161, 1649, 1624, 1519, 1497, 1461, 1261, 1123, 982, 844 cm^{-1}.
Ib-412	mp 138-140°C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 6H), 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.39 (s, 3H), 4.03 (t, J = 6.3Hz, 2H), 4.56 (d, J = 6.9Hz, 2H), 4.77 (m, 1H), 5.38 (tm, J = 6.9Hz, 1H), 5.54 (tm, J = 6.9Hz, 1H), 6.70 (d, J = 9.0Hz, 1H), 6.97 (d, J = 9.0Hz, 2H), 7.15 (s, 1H), 7.28 (d, J = 9.0Hz, 2H), 7.33 (s, 1H), 7.35 (d, J = 9.0Hz, 1H) ; IR (KBr) 3213, 1605, 1530, 1492, 1234, 1180, 994, 841 cm^{-1}.
Ib-413	mp 113-115°C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 3H), 1.77 (s, 3H), 1.78 (s, 3H), 1.81 (s, 3H), 2.28 (s, 3H), 2.39 (s, 3H), 3.98-4.15 (m, 2H), 4.64 (d, J = 6.9Hz, 2H), 4.76 (m, 1H), 5.38 (m, 1H), 5.55 (tm, J = 6.9Hz, 1H), 6.70 (d, J = 9.3Hz, 1H), 6.98-7.15 (m, 4H), 7.33 (s, 1H), 7.35 (d, J = 9.3Hz, 1H) ; IR (KBr) 3424, 3214, 1601, 1534, 1492, 1416, 1296, 1261, 1232, 1126, 983, 829 cm^{-1}.

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Ib-414	mp 159-161 °C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 3H), 1.78 (s, 3H), 2.29 (s, 3H), 2.38 (s, 3H), 4.03 (dd, J = 6.6, 5.7Hz, 2H), 4.91 (m, 1H), 5.38 (tm, J = 6.6Hz, 1H), 6.71 (d, J = 9.0Hz, 2H), 6.75 (d, J = 8.7Hz, 2H), 7.15 (s, 1H), 7.17 (d, J = 8.7Hz, 2H), 7.32 (s, 1H), 7.37 (d, J = 9.0Hz, 1H) ; IR (KBr) 3440, 3363, 3220, 1621, 1599, 1531, 1491, 1458, 1410, 1279, 1181, 1140, 1045, 1026, 835 cm^{-1}
Ib-415	mp 131-133 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.76 (s, 3H), 1.77 (s, 6H), 2.31 (s, 3H), 2.38 (s, 3H), 3.74 (d, J = 6.9Hz, 2H), 4.03 (dd, J = 6.0, 6.0Hz, 2H), 4.87 (brs, 1H), 5.38 (m, 2H), 6.67 (d, J = 8.4Hz, 2H), 6.71 (d, J = 9.3Hz, 1H), 7.15 (s, 1H), 7.19 (d, J = 8.4Hz, 2H), 7.32 (s, 1H), 7.36 (d, J = 9.3Hz, 1H) ; IR (KBr) 3385, 3207, 1609, 1529, 1493, 1457, 1186, 1045, 834 cm^{-1}
Ib-416	mp 174-175 °C; ^{1}H NMR ($CDCl_3$) δ 1.72 (s, 6H), 1.74 (s, 3H), 1.75 (s, 3H), 1.76 (s, 3H), 1.78 (s, 3H), 2.33 (s, 3), 2.38 (s, 3H), 3.91 (d, J = 6.0Hz, 4H), 4.03 (dd, J = 6.0, 6.0Hz, 2H), 4.88 (m, 1H), 5.26 (m, 2H), 5.38 (m, 1H), 6.71 (d, J = 9.0Hz, 1H), 6.75 (d, J = 9.0Hz, 2H), 7.17 (s, 1H), 7.22 (d, J = 9.0Hz, 2H), 7.32 (s, 1H), 7.37 (d, J = 9.0Hz, 1H) ; IR (KBr) 3432, 3252, 3133, 1615, 1578, 1524, 1473, 1449, 1350, 1316, 1305, 1234, 1195, 1162, 1057, 854, 819 cm^{-1}.
Ib-417	mp 224-227°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.95 (s, 6H); 1.96 (s, 6H); 4.64 (d, J = 6.6Hz, 2H); 4.91 (br s, 2H); 5.57 (m, 1H); 6.75-7.07 (m, 4H); 7.20 (dd, J = 1.8, 9.0Hz, 1H); IR (KBr): 3341, 3163, 1637, 1513, 1460, 1297, 1263, 1243, 1114, 1001 cm^{-1}.
Ib-418	mp 215-216°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 6H); 1.79 (s, 3H); 1.82 (s, 3H); 1.95 (s, 6H); 1.97 (s, 6H); 4.02 (t, J = 6.3Hz, 2H); 4.64 (d, J = 7.2Hz, 2H); 4.84 (br, 1H); 5.39 (m, 1H); 5.57 (m, 1H); 6.74 (dd, J = 1.2, 9.0Hz, 1H); 6.76-6.93 (m, 2H); 7.04 (t, J = 8.4Hz, 1H); 7.15 (dd, J = 1.8, 9.0Hz, 1H); IR (KBr): 3258, 2917, 1609, 1513, 1486, 1466, 1426, 1297, 1264, 1241, 1118 cm^{-1}.
Ib-419	mp 178-180 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 1.82 (s, 3H), 1.85 (s, 3H), 1.95 (s, 6H), 1.98 (s, 6H), 3.4 (br s, 1H), 3.75 (d, J = 6.9Hz, 2H), 5.11 (d, J = 6.9Hz, 2H), 5.40 (t, J = 6.9Hz, 1H), 5.63 (d, J = 6.9Hz, 1H), 6.70-6.74 (m, 2H), 6.92-6.99 (m, 2H), 7.04 (d, J = 9.2Hz, 1H), 7.32 (d, J = 9.2Hz, 1H) ; IR (KBr): 3368, 2979, 2932, 2915, 1612, 1520, 1438, 1303, 1285, 966, 821, 529 cm^{-1}.
Ib-420	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.77 (s, 6H), 1.79 (d, J = 1.2 Hz, 3H), 1.82 (d, J = 0.9 Hz, 3H), 2.04 (s, 3H), 2.12 (s, 3H), 3.35 (s, 3H), 3.42 (s, 3H), 4.02 (t, J = 6.2 Hz, 2H), 4.65 (d, J = 6.9 Hz, 2H), 4.81 (t, J = 5.0 Hz, 1H), 5.35-5.42 (m, 1H), 5.53-5.60 (m, 1H), 6.72 (d, J = 9.2 Hz, 1H), 6.95-7.08 (m, 3H), 7.29 (d, J = 9.2 Hz, 1H) .
Ib-421	mp 88-89°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.82 (s, 3H), 2.31 (s, 3H), 2.40 (s, 3H), 4.57 (d, J = 6.6Hz, 2H), 5.54 (t, J = 6.6Hz, 1H), 6.98 (d, J = 9.0Hz, 2H), 7.19 (s, 1H), 7.28 (d, J = 9.0Hz, 2H), 7.35 (s, 1H), 8.53 (d, J = 2.7Hz, 1H), 8.68 (dd, J = 2.7, 1.2Hz, 1H), 8.78 (d, J = 1.2Hz, 1H) ; IR (KBr) 1606, 1574, 1516, 1496, 1469, 1386, 1241, 1178, 1145, 1011, 1002, 982, 840, 833 cm^{-1}.
Ib-422	mp 87-88°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.31 (s, 3H), 2.40 (s, 3H), 4.64 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.99-7.14 (m 3H), 7.17 (s, 1H), 7.35 (s, 1H), 8.54 (m, 1H), 8.68 (m, 1H), 8.77 (m, 1H) ; IR (KBr) 1517, 1501, 1476, 1447, 1397, 1387, 1315, 1297, 1265, 1234, 1198, 1127, 996, 849 cm^{-1}.

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Ib-423	mp 74-77°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.29 (s, 3H), 2.37 (s, 3H), 4.56 (d, J = 6.9Hz, 2H), 4.60 (s, 2H), 5.54 (tm, J = 6.9Hz, 1H), 6.97 (d, J = 8.7Hz, 2H), 7.14 (s, 1H), 7.27 (d, J = 8.7Hz, 2H), 7.29 (s, 1H), 8.10 (s, 1H), 8.18 (s 1H) ; IR (KBr) 3464, 3319, 3165, 1606, 1477, 1381, 1241, 1178, 1023, 1002, 839, 832 cm^{-1}.
Ib-424	mp 127-128°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.28 (s, 3H), 2.37 (s, 3H), 4.62 (s, 2H), 4.63 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.12 (m, 3H), 7.13 (s, 1H), 7.29 (s 1H). 8.09 (d, J = 1.5Hz, 1H), 8.17 (d, J = 1.5Hz, 1H) ; IR (KBr) 3426, 3306, 3189, 1641, 1580, 1536, 1517, 1498, 1482, 1393, 1292, 1281, 1265, 1231, 1121, 982 cm^{-1}.
Ib-425	mp 136-138°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.82 (s, 3H), 2.28 (s, 3H), 2.38 (s, 3H), 3.74 (m, 1H), 4.56 (d, J = 6.9Hz, 2H), 5.54 (tm, J = 6.9Hz, 1H), 6.97 (d, J = 8.7Hz, 2H), 7.13 (s, 1H), 7.27 (d, J = 8.7Hz, 2H), 7.29 (s, 1H), 7.96 (d, J = 1.2Hz, 2H), 8.16 (d, J = 1.2Hz, 1H) ; IR (KBr) 3282, 1597, 1527, 1492, 1241, 1174, 1018, 885, 826 cm^{-1}.
Ib-426	mp 119-121°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.81 (s, 3H), 2.28 (s, 3H), 2.38 (s, 3H), 3.74 (m, 1H), 4.57 (d, J = 8.1Hz, 1H), 4.63 (d, J = 6.6Hz, 2H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.12 (m, 3H), 7.11 (s, 1H), 7.29 (s, 1H), 7.96 (d, J = 1.5Hz, 1H), 8.15 (d, J = 1.5Hz, 1H) ; IR (KBr) 3424, 3275, 1598, 1528, 1495, 1280, 1265, 1173, 1018, 1007 cm^{-1}.
Ib-427	mp 134-136°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.78 (s, 6H), 1.82 (s, 3H), 2.29 (s, 3H), 2.38 (s, 3H), 3.98 (t, J = 5.4Hz, 2H), 4.56 (d, J = 6.9Hz, 2H), 5.36 (tm, J = 6.9Hz, 1H), 5.54 (tm, J = 6.9Hz, 1H), 6.97 (d, J = 8.7Hz, 2H), 7.14 (s, 1H), 7.27 (d, J = 8.7Hz, 2H), 7.29 (s, 1H), 7.98 (d, J = 1.5Hz, 1H), 8.19 (d, J = 1.5Hz, 1H) ; IR (KBr) 3215, 1608, 1578, 1561, 1492, 1380, 1362, 1243, 1179, 1166, 1017, 1003, 830 cm^{-1}.
Ib-428	mp 99-100°C; ^{1}H NMR ($CDCl_3$) δ 1.76 (s, 6H), 1.78 (s, 3H), 1.81 (s, 3H), 2.28 (s, 3H), 2.38 (s, 3H), 3.98 (dd, J = 6.6, 5.4Hz, 2H), 4.59 (brs, 1H), 4.63 (d, J = 6.6Hz, 2H), 5.36 (t, J = 6.6Hz, 1H), 5.55 (t, J = 6.6Hz, 1H), 6.98-7.12 (m, 3H), 7.12 (s, 1H), 7.30 (s, 1H), 7.98 (d, J = 1.5Hz, 1H), 8.18 (d. J = 1.5Hz, 1H) ; IR (KBr) 3239, 1578, 1565, 1492, 1390, 1362, 1303, 1277, 1261, 1122, 995, 873, 827 cm^{-1}
Ib-429	mp 133-134 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.76 (s, 3H), 1.77 (s, 3H), 1.78 (s, 3H), 2.31 (s, 3H), 2.38 (s, 3H), 3.73 (d, J = 6.6Hz, 2H), 3.97 (dd, J = 6.0, 6.0Hz, 2H), 4.57 (m, 1H), 5.37 (m, 2H), 6.67 (d, J = 8.4Hz, 2H), 7.14 (s, 1H), 7.19 (d, J = 8.4Hz, 2H), 7.28 (s, 1H), 7.97 (d, J = 1.5Hz, 1H), 8.19 (d, J = 1.5Hz, 1H) ; IR (KBr) 3413, 3222, 1612, 1580, 1561, 1523, 1493, 1457, 1379, 1362, 1319, 1186, 1165, 1094, 1056, 1017, 822 cm^{-1}
Ib-430	Oil ^{1}H NMR ($CDCl_3$) δ 1.72 (s, 6H), 1.74 (s, 6H), 1.76 (s, 3H), 1.78 (s, 3H), 2.33 (s, 3H), 2.37 (s, 3H), 3.90 (d, J = 6.3Hz, 4H), 3.97 (dd, J = 6.0, 5.1Hz, 2H), 4.54 (m, 1H), 5.26 (m, 2H), 5.36 (m, 1H), 6.74 (d, J = 8.7Hz, 2H), 7.15 (s, 1H), 7.21 (d, J = 8.7Hz, 2H), 7.15 (s, 1H), 7.21 (d, J = 8.7Hz, 2H), 7.28 (s, 1H), 7.98 (d, J = 1.5Hz, 1H) 8.19 (d, J = 1.5Hz, 1H)

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Ib-431	mp 167-168 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H), 1.78 (s, 3H), 1.81 (s, 3H), 1.84 (s, 3H), 1.95 (s, 6H), 1.98 (s, 6H), 3.63 (br s, 1H), 3.74 (d, J = 6.6Hz, 2H), 4.90 (d, J = 7.1Hz, 2H), 5.39 (t, J = 6.6Hz, 1H), 5.58 (d, J = 7.1Hz, 1H), 6.67-6.71 (m, 2H), 6.87-7.00 (m, 2H), 8.07 (d, J = 1.5Hz, 1H), 8.35 (d, J = 1.5Hz, 1H) ; IR (KBr): 3355, 2964, 2926, 2874, 1614, 1521, 1458, 1345, 1312, 1270, 1029, 977, 820 cm^{-1}.
Ib-432	mp 161-162°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.94 (s, 6H); 1.97 (s, 6H); 4.64 (d, J = 6.3Hz, 2H); 4.64 (br s, 2H); 5.57 (m, 1H); 6.74-7.07 (m, 3H); 7.98 (s, 1H); 8.15 (s, 1H); IR (KBr): 3450, 3340, 2921, 1624, 1527, 1514, 1461, 1374, 1295, 1261, 1245, 1192, 1116 cm^{-1}.
Ib-433	mp 130-132°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 6H); 1.80 (s, 3H); 1.82 (s, 3H); 1.94 (s, 6H); 1.98 (s, 6H); 3.98 (br t, J = 5.4Hz, 2H); 4.56 (br, 1H); 4.64 (d, J = 6.6Hz, 2H); 5.39 (m, 1H); 5.57 (m, 1H); 6.74-7.08 (m, 3H); 7.99 (s, 1H); 8.02 (s, 1H); IR (KBr): 3244, 2918, 1584, 1560, 1514, 1468, 1380, 1295, 1264, 1241, 1114 cm^{-1}.
Ib-434	amorphous; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H), 1.80 (s, 3H), 1.96 (s, 6H), 1.98 (s, 6H), 3.5 (br s, 2H), 3.98 (m, 2H), 4.64 (m, 1H), 5.39 (m, 1H), 6.74-6.79 (m, 2H), 6.84-6.99 (m, 2H), 7.99 (d, J = 1.4 Hz, 1H), 8.04 (d, J = 1.4 Hz, 1H); IR (KBr): 3334, 1620, 1588, 1519, 1462, 1276, 1161, 1024, 824, 525 cm^{-1}
Ib-435	mp 180-182 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.74 (s, 3H), 1.78 (s, 3H), 1.79 (s, 3H), 1.97 (s, 6H), 1.98 (s, 6H), 3.4 (br s, 1H), 3.74 (d, J = 6.9 Hz, 2H), 3.98 (t, J = 6.0 Hz, 2H), 4.50 (t, J = 5.1 Hz, 1H), 5.36-5.41 (m, 2H), 6.66-6.72 (m, 2H), 6.86-7.02 (m, 2H), 8.00 (d, J = 1.4 Hz, 1H), 8.02 (d, J = 1.4 Hz, 1H); IR ($CHCl_3$): 3439, 1613, 1585, 1519, 1468 cm^{-1}
Ib-436	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.77 (s, 6H), 1.79 (d, J = 0.9 Hz, 3H), 1.81 (s, 3H), 2.04 (s, 3H), 2.08 (s, 3H), 3.34 (s, 3H), 3.41 (s, 3H), 3.99 (t, J = 5.3 Hz, 2H), 4.64 (d, J = 6.9 Hz, 2H), 4.58-4.67 (m, 1H), 5.34-5.42 (m, 1H), 5.53-5.60 (m, 1H), 6.93-7.07 (m, 3H), 8.02 (d, J = 1.5 Hz, 1H), 8.11 (d, J = 1.5 Hz, 1H) .
Ib-437	foam; ^{1}H NMR ($CDCl_3$) δ 2.21 (s, 3H), 2.28 (s, 3H), 6.34-6.49 (m, 2H), 6.80 (d, J = 2.1Hz, 1H), 7.03-7.12 (m, 3H), 7.40 (d, J = 2.4Hz, 1H), 7.61 (m, 1H) IR (KBr): 3414, 2862, 2589, 1652, 1601, 1541, 1492, 1430, 1330, 1186, 1222, 1186, 1147, 1123, 1040, 998 cm^{-1}
Ib-438	foam; ^{1}H NMR ($CDCl_3$) δ 2.12 (s, 3H), 2.78 (s, 3H), 6.61-6.81 (m, 3H), 6.99-7.06 (m, 3H), 7.41 (d, J = 2.1Hz, 1H), 7.58 (dd, J = 2.4, 8.7 Hz, 1H) IR (KBr): 3423, 2857, 2604, 1654, 1602, 1539, 1447, 1413, 1215, 1133, 1074 cm^{-1}
Ib-439	foam; ^{1}H NMR ($CDCl_3$) δ 1.73 (s, 3H), 1.79 (s, 3H), 2.14 (s, 3H), 2.28 (s, 3H), 3.71 (d, J = 6.6 Hz, 2H), 5.33-5.39 (m, 1H), 6.65-6.83 (m, 3H), 6.99-7.09 (m, 3H), 7.36 (d, J = 2.7Hz, 1H), 7.55-7.60 (m, 1H) IR (KBr): 3431, 2923, 2550, 1654, 1604, 1480, 1455, 1376, 1357, 1284, 971 cm^{-1}
Ib-440	mp 193-195 °C; ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 3H), 2.21 (s, 3H), 2.28 (s, 3H), 3.72 (d, J = 6.9 Hz, 2H), 5.35 (t, J = 6.9 Hz, 1H), 6.40 (dd, J =12.3, 2.1 Hz, 1H), 6.46 (dd, J = 8.4, 2.4 Hz, 1H), 6.67 (dd, J = 9.3, 0.6 Hz, 1H), 7.04 (t, J = 8.4 Hz, 1H), 7.07 (s, 1H), 7.11 (s, 1H), 7.39 (dd, J = 2.4, 0.6 Hz, 1H), 7.56 (dd, J = 9.3, 2.4 Hz, 1H); IR (KBr): 3413, 3302, 1660, 1620, 1497, 1466, 1421, 1337, 1232, 1174, 835 cm^{-1}

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Ib-441	mp 247-249°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.04 (s, 6H); 4.64 (d, J = 6.9Hz, 2H); 5.58 (m, 1H); 6.72 (d, J = 9.3Hz, 1H); 6.80-6.92 (m, 2H); 7.05 (dt, J = 1.2, 8.4Hz, 1H); 7.22 (d, J = 1.8Hz, 1H); 7.35 (ddd, J = 1.8, 2.4, 9.3Hz, 1H); IR (KBr): 3444, 2917, 1661, 1619, 1512, 1294, 1262 cm^{-1}.
Ib-442	mp 172-176°C; ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H); 1.82 (s, 3H); 1.95 (s, 6H); 2.05 (s, 6H); 4.64 (d, J = 6.9Hz, 2H); 5.57 (m, 1H); 6.75-7.25 (m, 5H); 10.81 (br s, 1H); IR (KBr): 2925, 1689, 1677, 1592, 1514, 1295, 1264, 1243, 1113, 1008 cm^{-1}.
Ib-443	mp 240-242°C; ^{1}H NMR ($CDCl_3$) δ 1.77 (s, 3H); 1.82 (s, 3H); 1.96 (s, 6H); 2.06 (s, 6H); 4.64 (d, J = 6.3Hz, 2H); 5.57 (m, 1H); 6.74-7.09 (m, 3H); 7.22 (d, J = 1.2Hz, 1H); 8.42 (d, J = 1.2Hz, 1H); IR (KBr): 2916, 1655, 1616, 1512, 1261 cm^{-1}.
Ib-539	^{1}HMR ($CDCl_3$): δ 1.59 (3H, s), 1.74 (3H, s), 1.79 (3H, s), 1.83 (3H, s), 2.20 (3H, s), 2.28 (3H, s), 4.32 (2H, d, J 7.2Hz), 4.89 (2H, d, J 6.9Hz), 5.32 (1H, bt, J 7.2Hz), 5.58 (2H, bt, J 6.9Hz), 5.81 (2H, bs), 6.83 (1H, d, J 8.4Hz), 7.14 (2H, bs), 7.03-7.30 (3H), 7.60 (1H, dd, J 8.4Hz, 2.4Hz), 8.18 (1H, d, J 2.4Hz).
Ib-540	^{1}HNMR ($CDCl_3$): δ 1.58 (3H, s), 1.73 (3H, s), 1.80 (3H, s), 1.82 (3H, s), 2.20 (3H, s), 2.28 (3H, s), 2.33 (1H, bs), 4.25 (2H, bs), 4.30 (2H, d, J 6.9Hz), 4.88 (2H, d, J 6.9Hz), 5.30 (1H, bt, J 6.9Hz), 5.58 (2H, bt, J 6.9Hz), 5.90 (2H, bs), 6.83 (1H, d, J 8.4Hz), 6.95-7.30 (3H), 7.13 (2H, bs), 7.60 (1H, dd, J 8.4Hz, 2.4Hz), 8.18 (1H, d, J 2.4Hz).
Ib-541	^{1}HMR ($CDCl_3$): δH 1.58 (3H, s), 1.73 (3H, s), 1.79 (3H, s), 1.82 (3H, s), 2.20(3H, s), 2.28 (3H, s), 2.71 (4H, s), 4.29 (2H, d, J 7.2Hz), 4.88 (2H, d, J 6.9Hz), 5.30 (1H, bt, J 6.9Hz), 5.57 (2H, bt, J 7.2Hz), 5.80(2H, bs,), 6.82 (1H, d, J 8.1Hz), 6.97-7.27 (3H), 7.13 (1H, d, J 2.4Hz), 7.60 (1H, dd, J 8.1Hz, 2.4Hz), 8.18 (1H, bs).
Ic-1	119-120 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 2.17 (3H, s), 2.24 (3H, s), 4.61 (2H, d, J = 6.8), 4.63 (1H, s), 5.52 (1H, br t, J = 6.8), 5.71 (1H, s), 6.66 (1H, s), 6.76 (1H, dd, J = 2.2, 8.3), 6.80 (2H, d, J = 8.3), 6.86-6.91 (4H, m), 7.07 (1H, s)
Ic-2	oil, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.78 (3H, s), 2.17 (3H, s), 2.25 (3H, s), 3.87 (3H, s), 4.62 (2H, d, J = 6.6), 4.67 (1H, s), 5.56 (1H, br t, J = 6.6), 6.68 (1H, s), 6.79-6.93 (7H, m), 7.09 (1H, s)
Ic-3	oil, ^{1}H-NMR ($CDCl_3$) δ 2.18 (3H, s), 2.22 (3H, s), 3.14 (3H, s), 5.16 (2H, s), 5.71 (1H, s), 6.77 (1H, dd, J = 2.0, 8.3), 6.81 (1H, s), 6.93-6.99 (4H, m), 7.10 (1H, s), 7.22 (2H, d, J = 9.0), 7.39-7.47 (5H, m)
Ic-4	oil, ^{1}H-NMR ($CDCl_3$) δ 2.19 (3H, s), 2.21 (3H, s), 3.11 (3H, s), 3.15 (3H, s), 5.15 (2H, s), 6.82 (1H, s), 6.95 (2H, d, J = 9.3), 7.10 (1H, s), 7.11 (1H, d, J = 8.3), 7.21 (1H, dd, J = 2.2, 8.3), 7.23 (2H, d, J = 9.3),7.31(1H, d, J = 2.2), 7.37-7.49(5H, m)
Ic-5	oil, ^{1}H-NMR ($CDCl_3$) δ 2.19 (3H, s), 2.20 (3H, s), 3.14 (3H, s), 3.91 (3H, s), 5.20 (2H, s), 6.79 (1H, dd, J = 2.0, 8.1), 6.81 (1H, s), 6.86 (1H, d, J = 2.0), 6.93 (1H, d, J = 8.1), 6.95 (2H, d, J = 9.0), 7.11 (1H, s), 7.22 (2H, d, J = 9.0), 7.32-7.49 (5H, m)
Ic-6	oil, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.19 (3H, s), 2.21 (3H, s), 3.14 (3H, s), 3.22 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 6.82 (1H, s), 6.95 (2H, d, J = 9.0), 7.04 (1H, d, J = 8.3), 7.11 (1H, s), 7.21 (1H, dd, J = 2.2, 8.3), 7.23 (2H, d, J = 9.0), 7.29 (1H, d, J = 2.2)

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Ic-7	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.80 (3H, s), 2.20 (3H, s), 2.22 (3H, s), 3.15 (3H, s), 3.89 (3H, s), 4.63 (2H, d, J = 6.8), 5.57 (1H, br t, J = 6.8), 6.81-6.85 (3H, m), 6.93 (1H, d, J = 8.8), 6.96 (2H, d, J = 8.8), 7.13 (1H, s),7.22 (2H, d, J = 8.8)
Ic-8	162-163 °C, ^{1}H-NMR ($CDCl_3$) δ 2.14 (3H, s), 2.26 (3H, s), 3.55 (2H, br s), 3.89 (3H, s), 5.19 (2H, s), 6.64 (1H, s), 6.68 (2H, d, J = 8.8), 6.77 (1H, dd, J = 2.0, 8.7), 6.84 (2H, d, J = 8.8), 6.85 (1H, d, J = 2.0), 6.91 (1H, d, J = 8.7), 7.06 (1H, s), 7.31-7.49 (5H, m)
Ic-9	111-112 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.16 (3H, s), 2.27 (3H, s), 3.56 (2H, br s), 3.87 (3H, s), 4.62 (2H, d, J = 6.8), 5.56 (1H, br t, J = 6.8), 6.65 (1H, s), 6.68 (2H, d, J = 9.0), 6.79-6.92 (5H, m), 7.08 (1H, s)
Ic-12	oil, ^{1}H-NMR ($CDCl_3$) δ 2.14 (3H, s), 2.28 (3H, s), 2.93 (6H, s), 3.89 (3H, s), 5.19 (2H, s), 6.64 (1H, s), 6.74 (2H, d, J = 9.0), 6.78 (1H, dd, J = 2.0, 8.3), 6.85 (1H, d, J = 2.0), 6.91 (1H, d, J = 8.3), 6.93 (2H, d, J = 9.0), 7.31-7.49 (5H, m)
Ic-14	oil, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.16 (3H, s), 2.28 (3H, s), 2.93 (6H, s), 3.87 (3H, s), 4.62 (2H, d, J = 6.8), 5.56 (1H, br t, J = 6.8), 6.65 (1H, s), 6.75 (2H, d, J = 9.0), 6.80-6.83 (2H, m), 6.90 (1H, d, J = 8.6), 6.93 (2H, d, J = 9.0), 7.08(1H, s)
Ic-16	119-120 °C, ^{1}H-NMR ($CDCl_3$) δ 2.13 (3H, s), 2.27 (3H, s), 3.01 (6H, s), 6.78 (1H, d, J = 9.3), 6.80 (2H, d, J = 8.8), 6.89 (1H, s), 7.16 (1H, s), 7.22 (2H, d, J = 8.8), 8.04 (1H, dd, J = 2.7, 9.3), 8.39 (1H, d, J = 2.7)
Ic-17	80-82 °C, ^{1}H-NMR ($CDCl_3$) δ 2.17 (3H, s), 2.30 (3H, s), 2.98 (6H, s), 3.61 (2H, br s), 6.50 (1H, s), 6.55 (1H, dd, J = 2.7, 8.6), 6.77 (2H, d, J = 9.0), 6.81 (1H, d, J = 2.7), 6.82 (1H, d, J = 8.6), 7.07 (1H, s), 7.20 (2H, d, J = 9.0),
Ic-18	141-142 °C, ^{1}H-NMR ($CDCl_3$) δ 2.21 (3H, s), 2.22 (3H, s), 3.00 (6H, s), 3.03 (3H, s), 6.41 (1H, br s), 6.71 (1H, s), 6.78 (2H, d, J = 8.8), 6.82 (1H, d, J = 8.8), 7.06 (1H, dd, J = 2.7, 8.8), 7.11 (1H, s), 7.21 (2H, d, J = 8.8), 7.39 (1H, d, J = 2.7)
Ic-19	138-139 °C, ^{1}H-NMR ($CDCl_3$) δ 2.20 (3H, s), 2.22 (3H, s), 3.00 (6H, s), 6.72 (1H, s), 6.78 (2H, d, J = 8.8), 6.85 (1H, d, J = 8.8), 7.12 (1H, s), 7.21 (2H, d, J = 8.8),7.35 (1H, dd, J = 2.7, 8.8), 7.77 (1H, d, J = 2.7), 7.82 (1H, br s),
Ic-20	oil, ^{1}H-NMR ($CDCl_3$) δ 1.73 (3H, s), 1.77 (3H, s), 2.16 (3H, s), 2.31 (3H, s), 2.98 (6H, s), 3.67 (2H, d, J = 6.6), 5.33 (1H, br t, J = 6.6), 6.48 (1H, dd, J = 2.7, 8.8), 6.49 (1H, s), 6.71 (1H, d, J = 2.7), 6.77 (2H, d, J = 8.8), 6.85 (1H, d, J = 8.8), 7.07 (1H, s), 7.20 (2H, d, J = 8.8)
Ic-23	126-128 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 2.26 (3H, s), 2.35 (3H, s), 4.58 (1H, br s), 4.61 (2H, d, J = 6.8), 4.96 (2H, s), 5.52 (1H, br t, J = 6.8), 5.72 (1H, s), 6.75-6.81 (3H, m), 6.89-6.92 (4H, m), 7.08 (1H, s), 7.27 (1H, s)
Ic-24	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.26 (3H, s), 2.35 (3H, s), 3.21 (3H, s), 4.53 (1H, s),, 4.62 (2H, d, J = 6.8), 4.96 (2H, s) 5.50 (1H, br t, J = 6.8), 6.78 (2H, d, J = 9.0), 6.90 (2H, d, J = 9.0), 7. 03 (1H, d, J = 8.5), 7.07 (1H, s), 7.20 (1H, dd, J = 2.2, 8.5),7.28(1H, s),7.29(1H,d,J = 2.2)
Ic-25	146-147 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.25 (3H, s), 2.26 (3H, s), 3.86 (3H, s), 4.62 (2H, d, J = 6.8), 4.78 (1H, s), 5.02 (2H, s), 5.56 (1H, br t, J = 6.8), 6.79-6.82 (3H, m), 6.86 (2H, d, J = 8.5), 6.90 (1H, d, J = 8.8), 7.04 (1H, s), 7.35 (2H, d, J = 8.5)
Ic-32	123-124 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.26 (6H, s9, 3.17 (3H, s), 3.21 (3H, s), 4.61 (2H, d, J = 6.8), 5.10 (2H, s), 5.50 (1H, br t, J = 6.8), 6.76 (1H, s), 7.02 (1H, d, J = 8.3), 7.04 (1H, s), 7.18 (1H, dd, J = 2.2, 8.3), 7.27 (1h, d, J = 2.2), 7.33 (2H, d, J = 8.8), 7.53 (2H, d, J = 8.8)

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Ic-33	125-127 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.24 (3H, s), 2.35 (3H, s), 3.87 (3H, s), 4.21 (2H, s9, 4.61 (2H, d, J = 6.6), 5.56 (1H, br t, J = 6.6), 6.59 (2H, d, J = 8.8), 6.73 (2H, d, J = 8.8), 6.81-6.85 (2H, m), 6.92 (1H, d, J = 8.8), 7.08 (1H, s), 7.23 (1H, s)
Ic-35	141-142 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.30 (3H, s), 2.40 (3H, s), 4.61 (2H, d, J = 6.8), 4.79 (1H, s), 5.53 (1H, br t, J = 6.8), 5.70 (1H, s), 6.79 (1H, dd, J = 2.2, 8.3), 6.84 (2H, d, J = 8.8), , 6.91 (1H, d, J = 8.3), 6.93 (1H, d, J = 2.2), 6.97 (1H, d, J = 16.1) 7.04 (1H, s), 7.18 (1H, d, J = 16.1), 7.43 (2H, d, J = 8.8), 7.46 (1H, s),
Ic-38	140-142 °C, ^{1}H-NMR ($CDCl_3$) δ 1.77 (3H, s), 1.82 (3H, s), 2.30 (3H, s), 2.41 (3H, s), 3.16 (3H, s), 3.22 (3H, s), 4.63 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 7.02 (1H, d, J = 15.4), 7.04 (1H, d, J = 8.3), 7.05 (1H, s), 7.22 (1H, dd, J = 2.2, 8.3), 7.29 (2H, d, J = 8.8), 7.30 (1H, d, J = 2.2), 7.31 (1H, d, J = 15.4), 7.48 (1H, s), 7.57 (2H, d, J = 8.8)
Ic-43	146-147 °C, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.25 (3H, s), 2.48 (3H, s), 3.88 (3H, s), 4.62 (2H, d, J = 6.8), 5.04 (1H, s), 5.56 (1H, br t, J = 6.8), 6.81-6.85 (4H, m), 6.92 (1H, d, J = 8.8), 7.10 (1H, s), 7.38 (1H, s), 7.44 (2H, d, J = 8.6)
Ic-44	121-122 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.79 (3H, s), 2.26 (3H, s), 2.49 (3H, s), 3.17 (3H, s), 3.88 (3H, s), 4.63 (2H, d, J = 6.8), 5.56 (1H, br t, J = 6.8), 6.81-6.85 (2H, m), 6.93 (1H, d, J = 8.8), 7.12 (1H, s), 7.29 (2H, d, J = 8.8), 7.40 (1H, s), 7.59 (2H, d, J = 8.8)
Ic-47	oil, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.79 (3H, s9, 2.26 (3H, s), 2.29 (3H, s), 3.89 (3H, s), 4.64 (2H, d, J = 6.6), 5.57 (1H, br t, J = 6.6), 5.82 (1H, s), 6.85-6.88 (2H, m), 6.90 (2H, d, J = 8.8), 6.95 (1H, d, J = 8.5), 7.14 (1H, s), 7.18 (1H, s), 7.81 (2H, d, J = 8.8)
Ic-49	oil, ^{1}H-NMR ($CDCl_3$) δ 1.75 (3H, s), 1.79 (3H, s), 2.07 (1H, d, 3.7), 2.21 (3H, s), 2.28 (3H, s), 3.87 (3H, s), 4.62 (2H, d, J = 6.8), 4.81 (1H, s), 5.56 (1H, br t, J = 6.8), 5.96 (1H, d, J = 3.7), 6.81 (2H, d, J = 8.8)6.82-6.85 (2H, m), 6.92 (1H, d, J = 8.8), 7.02 (1H, s), 7.25 (2H, d, J = 8.8), 7.42 (1H, s)
Ie-4	170-170.5 °C, ^{1}H-NMR ($CDCl_3$) δ 5.15 (2H, s), 5.75 (1H, s), 6.94 (1H, dd, J = 0.7, 8.5), 6.98 (2H, m), 7.06-7.16 (5H, m), 7.37-7.44 (5H, m), 7.83 (1H, dd, J = 2.4, 8.5), 8.34 (1H, dd, J = 0.7, 2.4)
Ie-5	122-122.5 °C
Ie-6	175-176 °C, ^{1}H-NMR ($CDCl_3$) δ 2.38 (3H, s), 5.11 (2H, s), 5.75 (1H, s), 6.94 (1H, d, J = 8.3), 6.98 (2H, m), 7.05-7.17 (5H, m), 7.22 (2H, d, J = 8.1), 7.32 (2H, d, J = 8.1), 7.83 (1H, dd, J = 2.4, 8.6), 8.34 (1H, d, J = 2.4)
Ie-7	144.5-145.5 °C, ^{1}H-NMR ($CDCl_3$) δ 2.37 (3H, s), 3.11 (3H, s), 5.12 (2H, s), 6.96 (1H, d, J = 8.6), 7.10-7.15 (5H, m), 7.21 (2H, d, J = 8.1), 7.33 (2H, d, J = 8.1), 7.39 (1H, dd, J = 2.2, 8.6), 7.47 (1H, d, J = 2.2), 7.83 (1H, dd, J = 2.7, 8.6), 8.33 (1H, d, J = 2.7)
Ie-8	125-127 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 4.61 (2H, d, J = 6.8), 5.51 (1H, br t, J = 6.8), 5.76 (1H, s), 6.91-7.01 (3H, m), 7.06-7.16 (5H, m), 7.83 (1H, dd, J = 2.4, 8.6), 8.34 (1H, dd, J = 0.7, 2.4)
Ie-9	127-128 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 3.22 (3H, s), 4.62 (2H, d, J = 6.8), 5.48 (1H, br t, J = 6.8), 6.96 (1H, dd, J = 0.7, 8.6), 7.06-7.15 (5H, m), 7.40 (1H, dd, J = 2.2, 8.6), 7.46 (1H, d, J = 2.2), 7.83 (1H, dd, J = 2.4, 8.6), 8.33 (1H, dd, J = 0.7, 2.4)
Ie-13	153-154 °C, ^{1}H-NMR ($CDCl_3$) δ 2.25 (3H, s), 3.10 (3H, s), 3.78 (3H, s), 5.16 (2H, s), 7.13 (2H, s), 7.19-7.25 (4H, m), 7.36-7.48 (7H, m)

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Ie-14	oil, ^{1}H-NMR ($CDCl_3$) δ 2.23 (3H, s), 2.39 (3H, s), 3.77 (3H, s), 5.09 (2H, s), 5.74 (1H, s), 6.69 (1H,dd,J=1.8,8.5),6.82(1H,d,J =1.8),6.98(1H, d,J=8.5),7.18-7.43(9H, m)
Ie-15	166-167 °C, ^{1}H-NMR ($CDCl_3$) δ 2.25 (3H, s), 2.38 (3H, s), 3.09 (3H, s), 3.78 (3H, s),5.11 (2H, s), 7.12 (2H, s), 7.15-7.44 (10H, m)
Ie-17	132-133 °C, ^{1}H-NMR ($CDCl_3$) δ 2.25 (3H, s), 3.10 (3H, s), 3.79 (3H, s), 3.83 (3H, s), 5.16 (2H, s), 6.91 (2H, d, J= 9.1), 6.94-7.23 (5H, m), 7.36-7.48 (5H, m)
Ie-18	oil, ^{1}H-NMR ($CDCl_3$) δ 2.24 (3H, s), 2.39 (3H, s), 3.78 (3H, s), 3.83 (3H, s), 5.09 (2H, s), 5.71 (1H, d, J = 1.8), 6.68 (1H, dd, J = 1.8, 7.9), 6.82 (1H, d, J = 1.8), 6.90 (2H, d, J = 1.8), 6.98 (1H, d, J = 7.9), 7.16 (2H, d, J = 1.8), 7.23 (2H, d, J = 7.9), 7.33 (2H, d, J = 7.9)
Ie-19	113-114 °C, ^{1}H-NMR ($CDCl_3$) δ 2.24 (3H, s), 2.38 (3H, s), 3.09 (3H, s), 3.78 (3H, s),3.83 (3H, s), 5.11 (2H, s), 6.91 (2H, d, J = 8.5), 7.34 (2H, d, J = 8.5)
Ie-23	157-158 °C
Ie-24	114-116 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H,s), 1.82 (3H, s), 2.23 (3H, s), 3.78 (3H, s), 4.60 (2H, d, J = 6.8), 5.52 (1H, br t, J = 6.8), 5.74 (1H, s), 6.67 (1H, dd, J = 2.0, 8.3), 6.79 (1H, d, J = 2.0), 6.91 (1H, d, J = 8.3), 7.07 (1H, dd, J = 8.3, 9.3), 7.21 (1H, dd, J = 4.6, 8.3)
Ie-25	107-108 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H,s), 1.81 (3H, s), 2.25 (3H, s), 3.21 (3H, s), 3.79 (3H, s), 4.62 (2H, d, J = 6.6), 5.50 (1H, br t, J = 6.6), 7.03-7.23 (7H, m)
Ie-27	177-178 °C, ^{1}H-NMR ($CDCl_3$) δ 2.24 (3H, s), 3.10 (3H, s), 3.92 (3H, s), 5.16 (2H, s), 6.99-7.49 (11H, m), 7.66 (2H, d, J =7.9)
Ie-28	170-172 °C, ^{1}H-NMR ($CDCl_3$) δ 2.22 (3H, s), 2.39 (3H, s), 3.92 (3H, s), 5.09 (2H, s), 5.71 (1H, s), 6.71 (1H, dd, J = 1.8, 7.9), 6.84 (1H, d, J = 1.8), 6.98 (1H, d, J = 7.9), 7.03 (2H, d, J = 7.3), 7.23 (2H, d, J = 7.9), 7.29-7.36 (3H, m), 7.67 (2H, dd, J = 1.2, 8.5)
Ie-29	169-170 °C, ^{1}H-NMR ($CDCl_3$) δ 2.24 (3H, s), 2.38 (3H, s), 3.10 (3H, s), 3.92 (3H, s), 5.11 (2H, s), 6.99-7.37 (10H, m), 7.66 (2H, d, J = 7.9)
Ie-31	150-151 °C, ^{1}H-NMR ($CDCl_3$) δ 2.22 (3H, s), 3.10 (3H, s), 3.81 (3H, s), 3.88 (3H, s),5.15 (2H, s), 6.87 (1H, s), 6.89 (2H, d J = 9.1), 7.09 (1H, d, J = 8.5), 7.14 (1H, dd, J = 1.8, 8.5), 7.24 (1H, d, J = 1.8), 7.36-7.53 (5H, m), 7.55 (2H, d, J = 9.1)
Ie-32	175-176 °C, ^{1}H-NMR ($CDCl_3$) δ 2.20 (3H, s), 2.39 (3H, s), 3.81 (3H, s), 3.88 (3H, s), 5.09 (2H, s), 5.68 (1H, s), 6.70 (1H, dd, J = 1.8, 7.9), 6.83 (1H, d, J = 1.8), 6.85 (1H, br s), 6.88 (2H, d, J = 9.2), 6.97 (1H, d, J = 7.9), 7.23 (2H, d, J = 7.9), 7.34 (2H, d, J = 7.9), 7.55 (2H, d, J = 9.2)
Ie-33	176-177 °C, ^{1}H-NMR ($CDCl_3$) δ 2.22 (3H, s), 2.37 (3H, s), 3.09 (3H, s), 3.81 (3H, s),3.88 (3H, s), 5.10 (2H, s), 6.87 (1H, s), 6.89 (2H, d, J = 8.5), 7.09 (1H, d, J = 8.5), 7.14(1H, dd, J = 1.8, 8.5), 7.22 (2H, d J = 8.5), 7.23 (1H, s), 7.34 (2H, d, J = 8.5), 7.55 (2H, d, J = 8.5)
Ie-38	188-189 °C, ^{1}H-NMR ($CDCl_3$) δ 2.21 (3H, s), 2.39 (3H, s), 3.89 (3H, s), 5.09 (2H, s), 5.68 (1H, s), 6.70 (1H, dd, J = 1.8, 7.9), 6.83 (1H, d, J = 1.8), 6.91-7.06 (4H, m), 7.23 (2H, d, J = 8.5), 7.34 (2H, d, J = 8.5), 7.56-7.65 (2H, m)
Ie-39	194-195 °C, ^{1}H-NMR ($CDCl_3$) δ 2.23 (3H, s), 2.38 (3H, s), 3.09 (3H, s), 3.89 (3H, s), 5.11 (2H, s), 6.94-7.21 (5H, m), 7.22 (2H, d, J = 1.8), 7.23 (1H, s), 7.35 (2H, d, J = 7.9), 7.57-7.63 (2H, m)
Ie-40	159-160 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.82 (3H, s), 2.21 (3H, s), 3.89 (3H, s), 4.60 (2H, d, J = 6.7), 5.52 (1H, t, J = 6.7), 5.71 (1H, s), 6.68 (1H, dd, J = 1.8, 8.5), 6.81 (1H, d, J = 1.8), 6.90 (1H, d, J = 8.5), 7.02 (2H, t, J = 8.5), 7.57-7.65 (2H, m)

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Ie-41	142-143 °C, ^{1}H-NMR ($CDCl_3$) δ 1.76 (3H, s), 1.81 (3H, s), 2.24 (3H, s), 3.21 (3H, s), 3.89 (3H, s), 4.62 (2H, d, J = 7.3), 5.50 (1H, t, J = 7.3), 6.94 (1H, s), 6.99-7.08 (3H, m), 7.13 (1H, dd, J = 2.4, 8.5), 7.22 (1H, d, J = 2.4), 7.56-7.65 (2H, m)
If-10	151-152 °C, ^{1}H-NMR ($CDCl_3$) δ 2.18 (3H, s), 3.09 (3H, s), 3.75-3.81 (8H, m), 3.83 (3H, s), 5.14 (2H, s), 7.08 (1H, d, J = 8.5), 7.11 (1H, dd, J = 1.7, 8.5), 7.21 (1H, d, J = 1.7), 7.35-7.47 (5H, m)
If-14	140-141 °C, ^{1}H-NMR ($CDCl_3$) δ 2.18 (3H, s), 2.36 (3H, s), 2.48 (4H, t, J = 5.5), 3.09 (3H, s), 3.83 (3H, s), 3.87 (4H, t, J = 5.5), 5.14 (2H, s), 7.07 (1H, d, J = 8.5), 7.11 (1H, dd, J = 1.8, 8.5), 7.21 (1H, d, J = 1.8), 7.33-7.49 (5H, m)
If-18	152-153 °C, ^{1}H-NMR ($CDCl_3$) δ 2.20 (3H, s), 3.09 (3H, s), 3.26 (4H, t, J = 5.5), 3.86 (3H, s), 4.01 (4H, t, J = 5.5), 5.14 (2H, s), 6.90 (1H, d, J = 7.3), 7.00 (2H, d, J = 7.3), 7.08 (1H, d, J = 8.5), 7.12 (1H, dd, J = 1.8, 8.5), 7.21-7.49 (8H, m)
If-26	195-197 °C, ^{1}H-NMR ($CDCl_3$) δ 2.44 (3H, s), 3.12 (3H, s), 4.05 (3H, s), 5.18 (2H, s), 7.14-7.21 (2H, m), 7.28 (1H, m), 7.38-7.48 (5H, m), 8.17 (1H, s), 9.22 (1H, s)
If-29	mp 122.5-123.5 °C, ^{1}H NMR ($CDCl_3$) δ 1.74 (s, 3H), 1.78 (s, 6H), 1.81 (s, 3H), 2.36 (s, 3H), 2.57 (br s, 3H), 3.74 (d, J = 6.9 Hz, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.37 (br t, J = 6.9 Hz, 1H), 5.56 (br t, J = 6.9 Hz, 1H), 6.68 (d, J = 8.7 Hz, 2H), 6.84 (dd, J = 0.6, 8.7, 1H), 7.19 (d, J = 8.7 Hz, 2H), 7.43 (br s, 1H), 7.83 (dd, J = 2.4, 8.7 Hz, 1H), 8.38 (dd, J = 0.6, 2.4 Hz, 1H)
If-30	mp 122.5-123.5 °C, ^{1}H NMR ($CDCl_3$) δ 1.78 (s, 3H), 1.81 (s, 3H), 2.37 (s, 3H), 2.58 (br s, 3H), 4.88 (d, J = 7.2 Hz, 2H), 5.56 (br t, J = 7.2 Hz, 1H), 6.77 (d, J = 8.4 Hz, 2H), 6.85 (dd, J = 0.6, 8.4, 1H), 7.16 (d, J = 8.4 Hz, 2H), 7.45 (br s, 1H), 7.84 (dd, J = 2.4, 8.4 Hz, 1H), 8.38 (dd, J = 0.6, 2.4 Hz, 1H)
Ig-1	mp 176-177°C; ^{1}H NMR ($CDCl_3$) δ 1.80 (s, 3H); 1.83 (s, 3H); 1.98 (s, 6H); 2.00 (s, 6H); 4.51 (br s, 2H); 4.88 (d, J = 6.9Hz, 2H); 5.90 (m, 1H); 6.63 (m, 1H); 6.85 (ddd, J = 0.9, 1.5, 8.4Hz, 1H); 7.29 (ddd, J = 2.1, 4.2, 8.4Hz, 1H); 7.39 (ddd, J = 1.2, 2.4, 8.4Hz, 1H); 7.90 (m, 1H); 7.97 (m, 1H); IR (KBr): 3464, 3302, 3164, 2916, 1638, 1603, 1512, 1491, 1459, 1385, 1360, 1300, 1279, 1242 cm-1.
Ig-2	mp 162-164°C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 3H); 1.78 (s, 3H); 1.80 (s, 3H); 1.83 (s, 3H); 1.98 (s, 6H); 2.02 (s, 6H); 3.91 (t, J = 5.7Hz, 2H); 4.51 (br t, 1H); 4.88 (d, J = 7.2Hz, 2H); 5.38 (m, 1H); 5.59 (m, 1H); 6.50 (m, 1H); 6.85 (ddd, J = 0.9, 1.5, 8.7Hz, 1H); 7.27 (ddd, J = 2.1, 4.2, 8.7Hz, 1H); 7.40 (ddd, J = 2.4, 3.3, 8.4Hz, 1H); 7.92 (m, 1H); 7.98 (dt, J = 0.9, 2.4Hz, 1H); IR (KBr): 3420, 3242, 2913, 1605, 1503, 1462, 1378, 1350, 1277, 1240 cm^{-1}.
Ig-3	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.07 (s, 3H), 2.09 (s, 3H), 3.34 (s, 3H), 3.36 (s, 3H), 4.59 (br s, 2H), 4.89 (d, J = 7.2 Hz, 2H), 5.54-5.62 (m, 1H), 6.62 (d, J = 8.4 Hz, 1H), 6.84 (dd, J = 8.4, 0.7 Hz, 1H), 7.45 (dd, J = 8.4, 2.2 Hz, 1H), 7.54 (dd, J = 8.4 Hz, 1H), 8.04 (d, J = 2.2 Hz, 1H), 8.10 (dd, J = 2.5, 0.7 Hz, 1H)
Ig-4	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.76 (s, 3H), 1.78 (d, J = 0.9 Hz, 3H), 1.80 (d, J = 0.9 Hz, 3H), 1.83 (d, J = 0.9 Hz, 3H), 2.07 (s, 3H), 2.10 (s, 3H), 3.34 (s, 3H), 3.36 (s, 3H), 3.91 (t, J = 6.0 Hz, 2H), 4.58 (br s, 1H), 4.88 (d, J = 6.9 Hz, 2H), 5.34-5.41 (m, 1H), 5.55-5.62 (m, 1H), 6.49 (dd, J = 8.6, 0.7 Hz, 1H), 6.84 (dd, J = 8.3, 0.8 Hz, 1H), 7.43 (dd, J = 8.6, 2.3 Hz, 1H), 7.55 (dd, J = 8.3, 2.3 Hz, 1H), 8.05 (dd, J = 2.3, 0.7 Hz, 1H), 8.11 (dd, J = 2.3, 0.8 Hz, 1H)

Table 140

Ig-5	mp 126-128 °C; ^{1}H NMR ($CDCl_3$) δ 1.75 (s, 6H), 1.78 (s, 6H), 2.07 (s, 6H), 2.55 (s, 6H), 3.90 (t, J = 6.0 Hz, 4H), 4.53 (m, 2H), 5.37 (t, J = 6.6 Hz, 2H), 6.47 (dd, J = 8.4, 0.9 Hz, 2H), 7.17 (dd, J = 8.4, 2.4 Hz, 2H), 7.82 (dd, J = 2.4, 0.9 Hz, 2H); IR (KBr): 3222, 1607, 1532, 1389, 1313, 981, 811 cm^{-1}
Ig-6	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.75 (s, 6H), 1.78 (d, J = 0.9 Hz, 6H), 2.10 (s, 6H), 3.36 (s, 6H), 3.91 (t, J = 0.9 Hz, 4H), 4.53 (t, J = 5.0 Hz, 2H), 5.34-5.42 (m, 2H), 6.48 (d, J = 8.5 Hz, 2H), 7.42 (dd, J = 8.5, 2.3 Hz, 2H), 8.05 (dd, J = 2.3, 0.8 Hz, 2H)
Ig-7	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.80 (s, 3H), 1.83 (s, 3H), 2.08 (s, 3H), 2.12 (s, 3H), 3.34 (s, 3H), 3.39 (s, 3H), 4.89 (d, J = 6.9 Hz, 2H), 5.17 (br s, 2H), 5.54-5.62 (m, 1H), 6.84 (dd, J = 8.6, 0.8 Hz, 1H), 7.53 (dd, J = 8.6, 2.3 Hz, 1H), 8.09 (dd, J = 2.3, 0.8 Hz, 1H), 8.32 (s, 2H)
Ig-8	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.76 (s, 3H), 1.78 (s, 3H), 1.80 (s, 3H), 1.83 (s, 3H), 2.08 (s, 3H), 2.13 (s, 3H), 3.34 (s, 3H), 3.40 (s, 3H), 4.05 (s, J = 6.2 Hz, 2H), 4.88 (d, J = 6.9 Hz, 2H), 5.14-5.18 (m, 1H), 5.35-5.42 (m, 1H), 5.55-5.61 (m, 1H), 6.85 (dd, J = 8.5, 0.7 Hz, 1H), 7.54 (dd, J = 8.5, 2.7 Hz, 1H), 8.10 (dd, J = 2.7, 0.7 Hz, 1H), 8.30 (s, 2H)
Ig-9	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.79 (s, 3H), 1.83 (d, J = 0.9 Hz, 3H), 2.07 (s, 3H), 2.08 (s, 3H), 3.34 (s, 3H), 3.40 (s, 3H), 4.67(br s, 2H), 4.89 (d, J = 7.2 Hz, 2H), 5.54-5.62 (m, 1H), 6.84 (dd, J = 8.6, 0.7 Hz, 1H), 7.53 (dd, J = 8.6, 2.5 Hz, 1H), 8.09 (dd, J = 2.5, 0.7 Hz, 1H), 8.12 (d, J =1.5 Hz, 1H), 8.15 (d, J = 1.5 Hz, 1H)
Ig-10	^{1}H NMR (300 MHz, $CDCl_3$) δ 1.77 (s, 3H), 1.79 (s, 6H), 1.83 (s, 3H), 2.07 (s, 3H), 2.09 (s, 3H), 3.34 (s, 3H), 3.41 (s, 3H), 3.99 (t, J = 5.7 Hz, 2H), 4.62 (br s, 1H), 4.88 (d, J = 6.9 Hz, 2H), 5.34-5.42 (m, 1H), 5.55-5.62 (m, 1H), 6.84 (dd, J = 8.4, 0.8 Hz, 1H), 7.53 (dd, J = 8.4, 2.5 Hz, 1H), 8.02 (d, J = 1.5 Hz, 1H), 8.09 (dd, J = 2.5, 0.8 Hz, 1H)

Experiment 1 Suppressive effect on a mitogenic activity of mouse splenocytes in vitro

[0121] In 96-well microtiter plate, 5×10^5 C3H/HeN mouse splenocytes suspended in 0.1 ml of 10 % fetal bovine serum-fortified RPMI 1640 medium containing 2 mM of sodium bicarbonate, 50 units/ml of penicillin, 50 μg/ml of streptomycin and 5×10^{-5} M of 2-mercaptoethanol were added. Then, 5 μg/ml of Concanavalin A (Con A) or 10 μg/ml of lipopolysaccharide (LPS) as a mitogen and the compound of a pre-determined concentration of the present invention were added to each well so that the final volume of each well reached 0.2 ml. Each compound of the present invention was dissolved in dimethylsulfoxide (DMSO) and diluted with the above RPMI 1640 medium to adjust the final concentration of 100 ng/ml or less. The splenocytes in the 96-well microtiter plate were cultivated at 37 °C for 3 days in an incubator keeping the humidity 100 %, carbon dioxide 5 % and air 95 %. Then, 25 μl of 6 mg/ml MTT {3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetxazolium bromide} (Sigma) was added to the each well and cultivated at 37 °C for 4 hours under the same conditions. After the cultivation, 50 μl of 20 % sodium dodecyl sulfate (SDS) containing 0.02 N hydrochloric acid was added to the generated formazan and the mixture was allowed to stand at 37 °C for 24 hours for dissolving formazan. The absorption intensity (OD) of formazan generated in proportion to the number of living cells was measured with an immunoreader (InterMed) equipped with a 570 nm filter (The Journal of Immunological Method, 65, 55-63, 1983). The 50 % inhibitory concentration of a cell proliferation (IC_{50}) was calculated from a correlation between the concentration of the compound of the present invention and the absorption intensity.

Experiment 2 Anti-proliferative activity on EL4 cells

[0122] In 96-well microtiter plate 4×10^4/0.1 ml of mouse thymoma strain EL4 cells were added and 0.1 ml of the compound of the present invention was added thereto so that the concentration was in a range of 0-5,000 ng/ml. After the cultivation for 3 days, the IC_{50} was calculated by the MTT method as described in Experiment 1.

[0123] The results of Experiments 1 and 2 are shown in Table 141.

Table 141

Compound No.	ConA IC_{50} (ng/ml)	LPS IC_{50} (ng/ml)	EL-4 IC_{50} (ng/ml)
Ia-2	≦10	≦10	33
Ia-42	16	31	200
Ia-43	74	154	500
Ia-45	66	373	811
Ia-66	52	39	80
Ia-94	12	21	50
Ib-3	41	145	307
Ib-13	58	179	426
Ib-16	3.1	6.7	400
Ib-17	29	60	78
Ib-20	51	196	576
Ib-23	78	283	651
Ib-37	92	361	114
Ib-40	16	55	60
Ib-44	60	317	426
Ib-54	<20	53	91
Ib-65	92	134	553
Ib-71	18	54	69
Ib-82	<20	<20	<20
Ib-101	42	261	493
Ic-1	48	158	473
Ic-14	15	53	207

[0124] As shown in the above, the compound of the present invention has immunosuppressive and anti-allergic effects.

Experiment 3 Suppressive effect on the IgE production against ovalbumin (OVA)

1) Animals

[0125] BALB/c mice (female, 8-10 weeks old) and Wistar rats (female, 8-10 weeks old) which were bought from Japan SLC, Inc. (Shizuoka) were used.

2) Immunizing method

[0126] BALB/c mice were immunized by an intraperitoneal administration of 0.2 ml suspension of 2 μg of ovalbumin (OVA) and 2 mg of aluminium hydroxide gel in physiological saline. After 10 days, blood was collected from hearts, then sera were separated and stocked at -40 °C till the measurement of IgE antibody titer.

3) Compounds

[0127] After the compound of the present invention was dissolved or suspended in N, N-dimethylacetoamide, the mixture was diluted 20 times with miglyol 812 neutral oil. The obtained solution was orally administered to mice at 0.1 ml per mouse (dose 40 mg/kg). The administration was continued for 10 days from the immunizing day to the day before the blood collection.

4) Measurement of anti-OVA IgE antibody titer (PCA titer)

[0128] The obtained mouse serum was 2-fold diluted with physiological saline, then each 50 μl of the solution was intradermally injected at dorsal skin of Wistar rats which previously hair cut. After 24 hours, a passive cutaneous anaphylaxis reaction (PCA) was induced by an intravenous injection of 0.5 ml of physiological saline containing 1 mg of OVA and 5 mg of Evans' blue dye. The rats were sacrified 30 minutes later and the highest dilution giving bluing with a diameter of 5 mm or more was recorded as the PCA titer. For example, when a serum is positive for the PCA reaction till 2^7 times dilution, the anti-OVA IgE antibody titer of the mouse is defined as 7. The results are shown in Table 142.

Table 142

Compound	PCA Titer	Compound	PCA Titer
Ia-356	5.3	Ib-281	0
Ib-37	0	Ib-283	3
Ib-69	1.5	Ib-284	6.8
Ib-90	1.7	Ib-285	2
Ib-218	5.5	Ib-293	5
Ib-219	<0	Ib-297	3
Ib-220	<0	Ib-298	2.3
Ib-221	0.3	Ib-299	0
Ib-222	<0	Ib-301	3
Ib-223	3.8	Ib-302	1.5
Ib-224	0	Ib-305	3
Ib-225	0	Ib-306	5.3
Ib-226	0	Ib-307	5
Ib-227	4.5	Ib-309	4.3
Ib-228	2.5	Ib-310	5.8
Ib-229	3	Ib-311	6.3
Ib-230	0	Ib-312	0
Ib-231	<0	Ib-322	4
Ib-232	1	Ib-329	3.8
Ib-233	2	Ib-330	0.5
Ib-234	<0	Ib-331	<0
Ib-235	<0	Ib-332	2.3
Ib-239	0	Ib-333	<0
Ib-240	0	Ib-334	<0
Ib-241	0	Ib-342	<0
Ib-242	1	Ib-343	0
Ib-243	2.3	Ib-344	0
Ib-244	0	Ib-350	2.3
Ib-245	5.3	Ib-351	2.8
Ib-246	0	Ib-352	<0
Ib-247	0	Ib-353	2.5
Ib-248	0	Ib-354	<0
Ib-249	0	Ib-358	<0
Ib-250	0	Ib-361	<0
Ib-259	0	Ib-396	<0
Ib-272	5.3	Ib-431	6.5
Ib-279	1	Ib-433	5.5
Ib-280	0	Ib-439	5.3
		Ig-2	6.8

[0129] As shown in the above, the compound of the present invention has a suppressive effect on the IgE production.

Formulation Example 1

[0130]

The compound of the present invention (Ia-1)	15 mg
Starch	15 mg
Lactose	15 mg
Crystalline cellulose	19 mg
Polyvinyl alcohol	3 mg
Distilled water	30 ml
Calcium stearate	3 mg

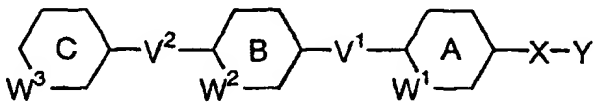
[0131] After all of the above ingredients except for calcium stearate were uniformly mixed, the mixture was crushed and granulated, and dried to obtain a suitable size of granules. After calcium stearate was added to the granules, tablets were formed by compression molding.

Industrial Applicability

[0132] As explained in the above experiments, the compound of the present invention has a potent immunosuppressive and/or anti-allergic activity. The compound of the present invention is very useful as an immunosuppressant, an anti-allergic agent and/or a suppressant of the IgE production.

Claims

1. A compound of the formula (I):



I

wherein A ring, B ring and C ring are each independently optionally substituted aromatic carbocycle or optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring,
W^1, W^2 and/or W^3 represents a bond when A ring, B ring and/or C ring is optionally substituted 5-membered heterocycle,
X is -O-, $-CH_2-$, $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl or -S(O)p-wherein p is an integer of 0 to 2,
Y is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted lower alkoxycarbonyl, optionally substituted sulfamoyl, optionally substituted amino, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
one of V^1 and V^2 is a bond and the other is a bond, -O-, -NH-, $-OCH_2-$, $-CH_2O-$, -CH=CH-, -C≡C-, $-CH(OR^2)-$ wherein R^2 is hydrogen or lower alkyl, -CO- or $-NHCHR^3-$wherein R^3 is hydrogen or hydroxy, and
at least one of A ring, B ring and C ring is optionally substituted aromatic carbocycle and at least another one is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring when both of V^1 and V^2 are single bonds, salt or hydrate thereof.

2. The compound as claimed in claim 1 wherein A ring is optionally substituted benzene ring, salt or hydrate thereof.

3. The compound as claimed in claim 1 wherein B ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted

pyrazine ring, optionally substituted thiophene ring, optionally substituted furan ring, optionally substituted pyrazole ring or optionally substituted oxazole ring, salt or hydrate thereof.

4. The compound as claimed in claim 1 wherein C ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted isoxazole ring, optionally substituted pyrazole ring, optionally substituted benzothiazole ring, optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring or optionally substituted triazole ring, salt or hydrate thereof.

5. The compound as claimed in claim 1 wherein X is -O- or -NR^1- wherein R^1 is hydrogen, methyl or prenyl, salt or hydrate thereof.

6. The compound as claimed in claim 1 wherein Y is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, lower alkylsulfonyl or optionally substituted acyl, salt or hydrate thereof.

7. The compound as claimed in claim 1 wherein one of V^1 and V^2 is a single bond and the other is a single bond, -O- or -NH-, salt or hydrate thereof.

8. The compound as claimed in claim 1 wherein A ring is optionally substituted benzene ring,
B ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted thiophene ring, optionally substituted furan ring, optionally substituted pyrazole ring or optionally substituted oxazole ring,
C ring is optionally substituted benzene ring, optionally substituted pyridine ring, optionally substituted pyrimidine ring, optionally substituted pyridazine ring, optionally substituted pyrazine ring, optionally substituted isoxazole ring, optionally substituted pyrazole ring, optionally substituted benzothiazole ring, optionally substituted morpholine ring, optionally substituted piperazine ring, optionally substituted imidazole ring or optionally substituted triazole ring,
X is -O- or -NR^1- wherein R^1 is hydrogen, methyl or prenyl,
Y is optionally substituted lower alkyl or optionally substituted lower alkenyl, and one of V^1 and V^2 is a single bond and the other is a single bond, -O- or -NH-, salt or hydrate thereof.

9. The compound as claimed in any one of claims 1 to 8 wherein two of A ring, B ring and C ring are optionally substituted benzene ring and the other is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring, salt or hydrate thereof.

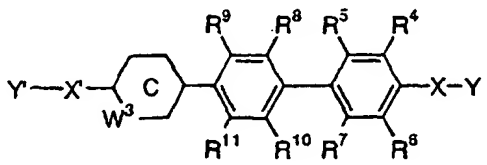
10. A pharmaceutical composition for use as an immunosuppressant comprising the compound, salt or hydrate thereof according to any one of claims 1 to 9.

11. A pharmaceutical composition for use as an antiallergic agent comprising the compound, salt or hydrate thereof according to any one of claims 1 to 9.

12. A pharmaceutical composition for use as a suppressant of the IgE production comprising the compound, salt or hydrate thereof according to any one of claims 1 to 9.

13. Use of the compound, salt or hydrate thereof according to any one of claims 1 to 9 for manufacturing a medicament for suppressing an immune response or treating and/or preventing allergic diseases.

14. A compound of the formula (Ib'):



Ib'

wherein C ring is optionally substituted 5- or 6-membered heterocycle which may fuse with benzene ring, W^3 represents a bond when C ring is 5-membered heterocycle,
X and X' are each independently -O-, $-CH_2-$, $-NR^1-$ (wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl) or -S(O)p- wherein p is an integer of 0 to 2,
Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted lower alkoxycarbonyl, optionally substituted amino, optionally substituted sulfamoyl, optionally substituted aryl or optionally substituted 5- or 6-membered heterocycle,
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR^1), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted cycloalkyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, optionally substituted carbamoyl, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy,
excluding a compound wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen,
salt or hydrate thereof.

15. The compound as claimed in claim 14 wherein R^4 and R^5 are each independently hydrogen, halogen or lower alkoxy, salt or hydrate thereof.

16. The compound as claimed in claim 14 wherein one of R^4 and R^5 is hydrogen and the other is halogen, salt or hydrate thereof.

17. The compound as claimed in any one of claims 14 to 16 wherein both of R^6 and R^7 are hydrogen, salt or hydrate thereof.

18. The compound as claimed in claim 14 wherein R^8 and R^{11} are each independently optionally substituted lower alkyl or optionally substituted lower alkoxy, salt or hydrate thereof.

19. The compound as claimed in claim 14 wherein R^8 and R^{11} are each independently methyl or methoxy, salt or hydrate thereof.

20. The compound as claimed in any one of claims 14, 18 and 19 wherein R^9 and R^{10} are each independently hydrogen or optionally substituted lower alkyl, salt or hydrate thereof.

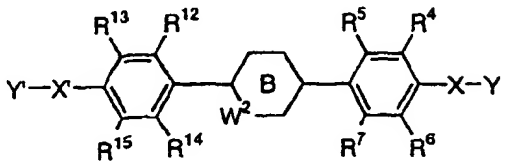
21. The compound as claimed in claim 14 wherein both of R^8 and R^{11} are optionally substituted lower alkyl or both of R^8 and R^{11} are optionally substituted lower alkoxy, and both of R^9 and R^{10} are simultaneously hydrogen or both of R^9 and R^{10} are optionally substituted lower alkyl, salt or hydrate thereof.

22. The compound as claimed in any one of claims 14, 16 and 21 wherein C ring is 5- or 6-membered heterocycle which contains at least one N atoms, salt or hydrate thereof.

23. The compound as claimed in any one of claims 14, 16 and 21 wherein C ring is 6-membered heterocycle which contains at least one N atom, salt or hydrate thereof.

24. The compound as claimed in any one of claims 14, 16 and 21 wherein C ring is optionally substituted pyridine or optionally substituted pyrimidine, salt or hydrate thereof.

25. A compound of the formula (Ia'):



Ia'

wherein B ring is optionally substituted 5- or 6-membered ring which contains one or two hetero atoms (wherein the substituent is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy, excluding a compound wherein B ring is substituted with only halogen(s)), and
W^2 represents a bond when B ring is 5-membered heterocycle,
X, X', Y and Y' are the same as defined in claim 14,
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl.
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
R^4, R^5, R^6, R^7, R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted lower alkenyl, optionally substituted lower alkenyloxy, optionally substituted acyloxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkenyloxycarbonyl, optionally substituted lower alkylthio, optionally substituted lower alkenylthio, optionally substituted amino, optionally substituted carbamoyl, guanidino, nitro, optionally substituted lower alkylsulfonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyl or optionally substituted arylsulfonyloxy, excluding

(i) a compound wherein Y and Y' are simultaneously hydrogen,
(ii) a compound wherein at least one of Y and Y' is optionally substituted acyl,
(iii) a compound wherein at least one of -X-Y and -X'-Y' is unsubstituted lower alkoxy, and
(iv) a compound wherein -X-Y and -X'-Y' are simultaneously optionally substituted lower alkoxy or amino substituted with phenyl,

salt or hydrate thereof.

26. The compound as claimed in claim 25 wherein R^4 and R^5 are each independently hydrogen, halogen or lower alkyl, salt or hydrate thereof.

27. The compound as claimed in claim 25 wherein one of R^4 and R^5 is hydrogen and the other is halogen, salt or hydrate thereof.

28. The compound as claimed in any one of claims 25 to 27 wherein both of R^6 and R^7 are hydrogen, salt or hydrate thereof.

29. The compound as claimed in claim 25 or 27 wherein B ring is 5- or 6-membered heterocycle which contains at least one N atom, salt or hydrate thereof.

30. The compound as claimed in claim 25 or 27 wherein B ring is 6-membered heterocycle which contains at least one N atom, salt or hydrate thereof.

31. The compound as claimed in claim 25 or 27 wherein B ring is optionally substituted pyridine or optionally substituted pyrimidine, salt or hydrate thereof.

32. The compound as claimed in claim 25 or 27 wherein R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen or lower alkyl, salt or hydrate thereof.

33. The compound as claimed in claim 14 or 25 wherein one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl, salt or hydrate thereof.

34. The compound as claimed in claim 14 or 25 wherein one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl or lower alkenyl and Y and Y' are each independently optionally substituted lower alkyl or optionally substituted lower alkenyl, salt or hydrate thereof.

35. The compound as claimed in claim 33 or 34 wherein R^1 is hydrogen, salt or hydrate thereof.

36. The compound as claimed in claim 14 or 25 wherein one of -X-Y and -X'-Y' is optionally substituted lower alkylamino or optionally substituted lower alkenylamino and the other is optionally substituted lower alkoxy or optionally substituted lower alkenyloxy, salt or hydrate thereof.

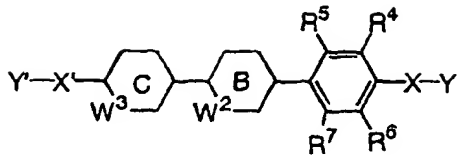
37. The compound as claimed in claim 14 or 25 wherein one of -X-Y and -X'-Y' is optionally substituted lower alkylamino or optionally substituted lower alkenylamino and the other is prenyloxy, salt or hydrate thereof.

38. The compound as claimed in claim 14 wherein R^4, R^5, R^6 and R^7 are each independently hydrogen, halogen or lower alkyl,
R^8 and R^{11} are each independently hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkoxy or lower alkoxycarbonyl,
R^9 and R^{10} are each independently hydrogen, optionally substituted lower alkyl or optionally substituted lower alkoxy,
one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl, lower alkenyl or lower alkylcarbonyl, Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl,
and C ring is optionally substituted pyridine or optionally substituted pyrimidine, salt or hydrate thereof.

39. The compound as claimed in claim 14 wherein X' is -O-, $-NR^1-$ or -S(O)p- and C ring is optionally substituted 5-membered heterocycle which contains one or two hetero atoms, salt or hydrate thereof.

40. The compound as claimed in claim 25 wherein R^4, R^5, R^6 and R^7 are each independently hydrogen, halogen or lower alkyl, R^{12}, R^{13}, R^{14} and R^{15} are each independently hydrogen, halogen or lower alkyl, B ring is optionally substituted pyridine or optionally substituted pyrimidine wherein the substituent is optionally substituted lower alkyl or optionally substituted lower alkoxy,
one of X and X' is -O- and the other is $-NR^1-$ wherein R^1 is hydrogen, lower alkyl, lower alkenyl or lower alkylcarbonyl and Y and Y' are each independently optionally substituted lower alkyl, optionally substituted lower alkenyl or optionally substituted lower alkynyl, salt or hydrate thereof.

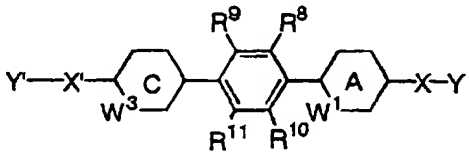
41. A compound of the formula (If'):



If'

wherein one of B ring and C ring is optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms and the other is 6-membered heterocycle which contains at least one N atom, excluding a compound wherein every substituent of B ring is selected from cyano and halogen,
X, X', Y, Y' and W^3 are the same as defined in claim 14, W^2 are the same as defined in claim 25,
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
R^4, R^5, R^6 and R^7 are the same as defined in claim 14,
salt or hydrate thereof.

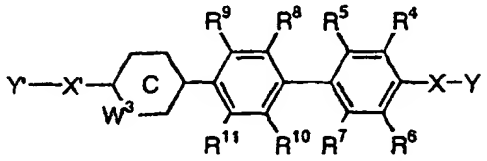
42. The compound of the formula (Ig'):



Ig'

wherein A ring and C ring are each independently optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms,
W^1 represents a bond when A ring is 5-membered heterocycle,
X, X', Y, Y' and W^3 are the same as defined in claim 14,
R^1,taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or NR^1-,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or NR^1-,
R^8, R^9, R^{10} and R^{11} are the same as defined in claim 14,
excluding a compound wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen,
salt or hydrate thereof.

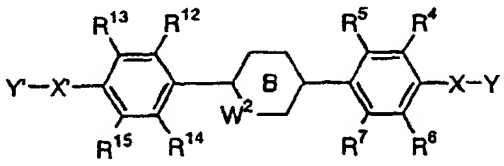
43. A pharmaceutical composition for use as an immunosuppressant comprising a compound of the formula (Ib'):



Ib'

wherein C ring and W^3 are the same as defined in claim 14,
X and X' are each independently -O-, $-CH_2-$, $-NR^1-$ (wherein R^1 is hydrogen, optionally substituted lower alkyl, lower alkenyl, lower alkylcarbonyl or optionally substituted lower alkoxycarbonyl), -S(O)p- (wherein p is an integer of 0 to 2) or a single bond,
Y and Y' are the same as defined in claim 14,
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen, hydroxy, halogen, nitro or oxo when X' is a single bond,
R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are the same as defined in claim 14,
excluding a compound wherein all of R^8, R^9, R^{10} and R^{11} are selected from hydrogen and halogen,
salt or hydrate thereof.

44. A pharmaceutical composition for use as an immunosuppressant comprising a compound of the formula (Ia'):



Ia'

wherein B ring is optionally substituted 5- or 6-membered heterocycle which contains one or two hetero atoms excluding a compound wherein every substituent of B ring is selected from cyano and halogen,
W^2 represents a bond when B ring is 5-membered heterocycle,
X, X', Y and Y' are the same as defined in claim 14,
R^1, taken together with Y or Y', may form $-(CH_2)m-$, $-(CH_2)_2-Q-(CH_2)_2-$ (wherein Q is CH_2, O, S or NR'), -CR'=CH-CH=CR'-, -CH=N-CH=CH-, -N=CH-N=CH-, $-C(=O)-O(CH_2)n-$, $-C(=O)-NR'-(CH_2)n-$ or -C(=O)-NR'-N=CH- wherein m is 4 or 5, n is 2 or 3, R' is hydrogen, lower alkyl or lower alkenyl,
Y may be optionally substituted lower alkoxy when X is $-CH_2-$,
Y' may be optionally substituted lower alkoxy when X' is $-CH_2-$,
Y may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X is -O- or $-NR^1-$,
Y' may be optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl when X' is -O- or $-NR^1-$,
Y may be hydrogen or halogen when X is $-CH_2-$ or $-NR^1-$,
Y' may be hydrogen or halogen when X' is $-CH_2-$ or $-NR^1-$,

R^4, R^5, R^6, R^7 R^{12}, R^{13}, R^{14} and R^{15} are the same as defined in claim 25, excluding

(i) a compound wherein -X-Y and -X'-Y' are simultaneously unsubstituted lower alkyl, optionally substituted lower alkoxy or unsubstituted acyloxy,
(ii) a compound wherein one of -X-Y and -X'-Y' is methyl and the other is methoxy, and
(iii) a compound wherein -X'-Y' is hydrogen or halogen and -X-Y is unsubstituted lower alkyl, unsubstituted lower alkoxy or di(lower)alkylamino,

salt or hydrate thereof.

45. A pharmaceutical composition for use as an immunosuppressant comprising a compound of the formula (If'), salt or hydrate thereof according to claim 41.

46. A pharmaceutical composition for use as an immunosuppressant comprising the compound of the formula (Ig'), salt or hydrate thereof according to claim 42.

47. A pharmaceutical composition for use as an antiallergic agent comprising the compound of the formula (If') according to claim 41, the compound of the formula (Ig') according to claim 42, the compound of the formula (Ib') according to claim 43, the compound of the formula (Ia') according to claim 44, salt or hydrate thereof.

48. A pharmaceutical composition for use as a suppressant of the IgE production comprising of the compound of the formula (If') according to claim 41, the compound of the formula (Ig') according to claim 42, the compound of the formula (Ib') according to claim 43, the compound of the formula (Ia') according to claim 44, salt or hydrate thereof.

49. Use of the compound of the formula (If') according to claim 41, the compound of the formula (Ig') according to claim 42, the compound of the formula (Ib') according to claim 43, the compound of the formula (Ia') according to claim 44, salt or hydrate thereof for manufacturing a medicament for suppressing an immune response, treating and/or preventing allergic diseases.

50. A method for suppressing an immune response, comprising administering the compound of the formula (If') according to claim 41, the compound of the formula (Ig') according to claim 42, the compound of the formula (Ib') according to claim 43, the compound of the formula (Ia') according to claim 44, salt or hydrate thereof.

51. A method for treating and/or preventing allergic diseases, comprising administering the compound of the formula (If') according to claim 41, the compound of the formula (Ig') according to claim 42, the compound of the formula (Ib') according to claim 43, the compound of the formula (Ia') according to claim 44, salt or hydrate thereof.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP99/00297

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[6] C07C43/215, C07C43/23, C07C43/285, C07C43/295, C07C49/84, C07C205/38, C07C217/58, C07C217/80, C07C217/86, C07C217/90,
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[6] C07C43/215, C07C43/23, C07C43/285, C07C43/295, C07C49/84, C07C205/38, C07C217/58, C07C217/80, C07C217/86, C07C217/90,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAPLUS (STN), REGISTRY (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP, 63-45243, A (Riker Laboratories, Inc.), 26 February, 1988 (26. 02. 88) & JP, 7-53485, A & US, 5347036, A & US, 5416113, A & US, 5495043, A & US, 5498745, A & US, 5527824, A	1-13 14-49
X A	JP, 1-143856, A (American Home Products Corp.), 6 June, 1989 (06. 06. 89) & EP, 310370, A1 & US, 4826990, A & US, 4895953, A	1-13 14-49
X A	JP, 63-119425, A (Yoshitomi Pharmaceutical Industries,Ltd.), 24 May, 1988 (24. 05. 88) (Family: none)	1-13 14-49
X A	JP, 4-276551, A (Fuji Photo Film Co., Ltd.), 1 October, 1992 (01. 10. 92) & EP, 503459, A2 & US, 5547848, A	1-9, 25-37, 40 10-24, 38-39, 41-49

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 April, 1999 (27. 04. 99)	18 May, 1999 (18. 05. 99)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP99/00297

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP, 63-22044, A (Nichiiko Pharmaceutical Co., Ltd.), 29 January, 1988 (29. 01. 88) (Family: none)	1-9, 25-37, 40 10-24, 38-39, 41-49
X A	JP, 5-507732, A (Schering AG.), 4 November, 1993 (04. 11. 93) & WO, 92/18500, A1 & EP, 533878, A1 & US, 5256682, A	1-9, 41 10-40, 42-49
X A	JP, 1-279872, A (Schering AG.), 10 November, 1989 (10. 11. 89) & EP, 323799, A1 & US, 5179111, A	1-9, 41 10-40, 42-49
X A	JP, 9-506101, A (Smithkline Beecham PLC), 17 June, 1997 (17. 06. 97) & WO, 95/15954, A1 & EP, 733048, A1 & US, 5801170, A	1-9, 14-24, 33-39 10-13, 25-32, 40-49
X A	JP, 58-121225, A (B.B.C. AG. Brown, Boveri & Cie.), 19 July, 1983 (19. 07. 83) & US, 5047170, A & US, 4808333, A & US, 5179101, A & US, 5338483, A & US, 5310501, A	1-9, 14-24, 33-39 10-13, 25-32, 40-49
X A	JP, 2-500274, A (Pauljuchenko Assyaiosifovna), 1 February, 1990 (01. 02. 90) & WO, 88/07992, A1 & EP, 310676, A1	1-9, 14-24, 33-39 10-13, 25-32, 40-49
X A	JP, 8-208653, A (Sagami Chemical Research Center.), 13 August, 1996 (13. 08. 96) & WO, 96/16965, A1 & EP, 799827, A1 & US, 5786486, A	1-9, 42 10-41, 43-49
X A	ES, 2015648, A (Consejo Superior de Investigaciones Cientificas), 1 September, 1990 (01. 09. 90) (Family: none)	1-9, 42 10-41, 43-49

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP99/00297

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [x] Claims Nos.: 50, 51

because they relate to subject matter not required to be searched by this Authority, namely:

The subject matters of claims 5 to 8 relate to a method of treatment of a human body by therapy which does not require an examination by the International Examining Authority in accordance with PCT Article 17(2)(a)(i) and Rule 39.1(iv).

2. [ ] Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. [ ] Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (1)) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP99/00297

A. (Continuation) CLASSIFICATION OF SUBJECT MATTER

C07C233/25, C07C309/66, C07C311/08, C07D213/30, C07D213/32, C07D213/38, C07D213/61, C07D213/64, C07D213/74, C07D231/14, C07D231/20, C07D231/38, C07D237/14, C07D239/26, C07D239/34, C07D239/42, C07D241/18, C07D261/08, C07D261/12, C07D261/14, C07D263/32, C07D277/66, C07D307/42, C07D307/52, C07D317/72, C07D333/16, C07D333/20, C07D401/04, C07D401/12, C07D403/04, C07D403/12, C07D405/04, C07D405/12, C07D409/04, C07D409/12, C07D413/04, C07D413/12, C07D417/04, C07D417/12, A61K31/335, A61K31/34, A61K31/38, A61K31/42, A61K31/425, A61K31/44, A61K31/495, A61K31/50, A61K31/505

B. (Continuation) FIELDS SEARCHED

C07C233/25, C07C309/66, C07C311/08, C07D213/30, C07D213/32, C07D213/38, C07D213/61, C07D213/64, C07D213/74, C07D231/14, C07D231/20, C07D231/38, C07D237/14, C07D239/26, C07D239/34, C07D239/42, C07D241/18, C07D261/08, C07D261/12, C07D261/14, C07D263/32, C07D277/66, C07D307/42, C07D307/52, C07D317/72, C07D333/16, C07D333/20, C07D401/04, C07D401/12, C07D403/04, C07D403/12, C07D405/04, C07D405/12, C07D409/04, C07D409/12, C07D413/04, C07D413/12, C07D417/04, C07D417/12, A61K31/335, A61K31/34, A61K31/38, A61K31/42, A61K31/425, A61K31/44, A61K31/495, A61K31/50, A61K31/505

Form PCT/ISA/210 (extra sheet) (July 1992)